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MONTHLY REPORT

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

MAY, 1939.

The so-called "merry" month opened under very favourable weather conditions, and after the good progress made in April it is expected that spring work will be completed satisfactorily after all, although a little later than normal. This is a most satisfactory ending to what has been a very trying period for the arable farmer. In view of the rather conflicting reports from the various districts of the areas under the principal crops this season, to attempt a general estimate for the whole country would be more speculative than usual; the season has in many respects been a most unusual one and, having regard to the effects of the weather and the economic pros and cons which the farmer has had to measure up, the question is best left unanswered at this stage. Another stimulus to arable farming has, however, been added within the past few days. This is the scheme of grants of £2 an acre for the ploughing up of grassland which is now before the British Parliament. Full particulars, as far as are known at present, will be found in this issue on page 34. Once again we would remind intending applicants for this, as for other government grants, that application should be made early so as to avoid the danger of overlooking this necessary step, and through neglect, failing in time to share in the financial benefits.

This month's issue contains an informative article on the Value of the Agricultural Output from 1930-31 to 1937-38, which brings as nearly up to date as possible information which was published in the Monthly Report for March, 1938. The article shows that since 1932-33 there has been an increase of nearly six and a half million pounds in the value of the output, and it considers how far this increase has been due to expanding production of livestock and livestock products on the one hand, and to a rise in the price level on the other. The relation between the increase in the gross income of Northern Ireland farmers and the various Government measures for assisting farmers and re-organising marketing is also pointed out.

Following the custom of previous years a guide to the Ministry's Exhibit at the forthcoming Show of the Royal Ulster Agricultural Society is included on page 19.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st MAY, 1939.

In general the month of April was somewhat unsettled, but weather conditions were much drier than formerly, and field work was in consequence advanced at a rapid pace in most districts. There were many fine days throughout the month and, although rain fell heavily on occasions, the wet spells were of comparatively short duration and did not seriously retard the progress of spring cultivations. Cold, north-easterly winds were fairly prevalent and, while they were appreciated to some extent for helping to dry up the land, they were most unwelcome otherwise in that they had an adverse effect on growth and, together with the heavy ground frosts on numerous nights, they checked the growth of grass and other young plants.

Soil conditions became drier during the month and their general improvement was remarkably rapid. Cultivations were, therefore, more readily done than was considered possible a short time earlier. Only on heavy and badly drained land was the soil in a damp state and difficult to work. As a result of these favourable conditions good progress was made with the sowing of the oat crop and the work completed on many farms, most of the potato crop was planted in many districts, and a commencement was made with the sowing of the flax in some. Despite this good progress, however, there are still some arrears of field work to be made up on many farms, varying in extent from one week to one month behind the normal schedule.

As stated, cold winds and low ground temperatures on numerous occasions combined to check growth, and pastures are generally short and bare of grass. The effects of early applications of phosphatic manures made last autumn and winter are, however, now noticeable in the greener state of the fields which were treated. It was reported that lime was applied to pastures as well as tillage land to a greater extent than last year and, whilst the use of basic slag was comparatively small, the Land Fertility Scheme was availed of for the purchase of this fertiliser to an increased extent as compared with last year, although difficulties were sometimes encountered in obtaining supplies.

With grass continuing scarce there was a further heavy drain on stocks of home-grown fodder, and the scanty supplies of roots have nearly all been used up. Hay has also been considerably reduced in quantity, but it is unlikely that a general shortage will be experienced before grass becomes plentiful. Straw remains in good supply, and although potatoes have been selling at dearer prices many farmers have continued to use their surplus stocks in place of roots for feeding to live stock. The position in regard to supplies of purchased cakes and meals generally showed little alteration on the month, but some local shortages were experienced and prices fluctuated slightly in sympathy for some of the principal meals.

While the general condition and health of live stock remained satisfactory during April, outlying cattle suffered from the low temperatures and the consequent bareness of pastures, and hand-feeding had to be done to a larger extent than usual at this time of the year to maintain the normal thrive of the animals. Sheep also felt the shortage of good grass, especially the young lambs, whose development was much less marked than usual on this account. Seasonal outbreaks of disease among cattle and sheep were of a comparatively mild nature.

A feature of the offerings at fairs last month was the large proportion of thin and backward store cattle. Trade in this end continued slow, with graziers holding back until more grass was available. Fat cattle, however, were in good supply and in steady request all month at improved rates. There was also a slight improvement in the trade for dairy cattle, whilst increased offerings of fat sheep and lambs continued to clear steadily at firm rates.

THE CROPS.

WHEAT.—More wheat has been sown this spring than last, but this increase has not compensated for the considerable reduction in the area under autumn-sown wheat, which resulted from the unfavourable weather conditions, and the total acreage under wheat is appreciably smaller than it was in 1938. Further sowings of wheat during April were very slight in extent. The brairds generally are looking very well, but in some districts thin brairds are fairly common.

Small quantities of wheat continued to be marketed last month at current rates of from 5/6d. to 6/3d. per cwt.

OATS.—The numerous fine and dry spells last month enabled considerable progress to be made with the sowing of the oat crop, and in most districts it is now nearing completion. In hilly districts and also in a few heavy soil areas, however, a good deal of sowing has still to be done. The brairds in early-sown fields are very satisfactory, and so far there have been no reports of attacks by pests or disease. While it is still rather early to state how the area under oats this year compares with 1938, it seems probable that the increased subsidy payment will encourage farmers at least to maintain their 1938 acreages.

Supplies of white oats at markets last month were variable, and in the aggregate were smaller than in March. Prices ruled more or less steady and averaged 5/6d. per cwt. as against 5/7¾d. for March. The current rates for seed oats are shown on page 65.

The weekly quantities of oat straw were also variable, but the total marketed was below that for the previous month, and the average price was firmer at 42/6d. per ton.

BARLEY.—In most districts where this crop is usually grown, sowings have been practically completed under reasonably good conditions. No considerable increase in the acreage under barley is considered likely, but the increased subsidy payment and the high value of the grain for feeding purposes have encouraged many farmers to sow slightly larger areas. The brairds of this crop are generally in a satisfactory condition.

The prices of barley for seed are given on page 65.

FLAX.—Variable reports regarding this crop have been received. Seed is cheaper this season (see page 65) and in some areas larger quantities have been purchased than was the case last year, but in others considerable reductions in the acreage under flax are expected. The low prices ruling in recent years and labour difficulties are cited as factors which militate against the more extensive growing of this crop. On the whole, however, it seems probable that the total acreage of this year's flax crop will be somewhat larger than that of 1938. At 1st May it was still rather early for sowing, but in a few districts good progress with this work had already been made.

The principal flax markets have closed for the season, and only a few small lots of flax were marketed last month and prices ranged from 8/6 to 10/6 per stone.

TURNIPS AND MANGELS.—The preparation of the seed-beds was pushed forward last month, but except in a few early districts little sowing was done. The current prices of mangel and turnip seeds are shown in the table on page 65.

HAY.—Both the upland and meadow crops are generally in a backward condition, as growth has been retarded by the cold winds. In some areas, however, young meadows are in a promising condition.

The quantities of hay remaining on farms are as a rule somewhat below average, but in most cases they will be sufficient to finish the season. Lighter quantities were marketed in April, and the monthly average prices for both the upland and meadow qualities were firmer at 62/9d. per ton, and 51/2d. per ton respectively.

The much reduced supplies of rye grass seed marketed cheapened further in price, and averaged 18/2½d. per cwt. for Italian, and 16/1¾d. for Perennial. The retail cash prices of grass seeds at 1st May are shown on page 65.

POTATOES.—The work of planting this crop was considerably advanced during April, and in some of the earlier districts it was nearing completion at the end of the month. In most areas the bulk of the early varieties is in the drills, and also a good proportion of the main crop, but in some of the later districts little planting has yet been done.

Tubers which survived the severe frosts and wet conditions of the past winter are now keeping fairly well in storage. The poor demand for ware potatoes prevalent during the winter has resulted in a fair proportion of the crop remaining on farms.

Good supplies of ware tubers were available throughout the month, and the improved conditions in the shipping trade continued up to the middle of April since when a weaker trend has followed.

The following record of weekly shipments illustrates this point as regards the volume of trade, whilst the prices paid by merchants, as shown hereunder for the first week of May, finished slightly below the general levels recorded at the beginning of April, after having reached their peak in the second week of last month.

SHIPMENTS TO GREAT BRITAIN.

Week ended	*Tons*	*Week ended*	*Tons*
8th April, 1939 ...	5,037	9th April, 1938 ...	5,470
15th „ „ ...	4,927	16th „ „ ...	4,163
22nd „ „ ...	4,118	23rd „ „ ...	3,712
29th „ „ ...	4,322	30th „ „ ...	6,546

The prices per ton as paid by Northern Ireland shipping merchants for the week ended 6th May.

WARE.

Variety	*Bagged.*	*Loose.*
Up-to-Date ...	£3 0 0 to £3 5 0	£2 15 0
Arran Banner	£2 15 0 „ £3 0 0	£2 10 0 to £2 15 0
Arran Victory	£3 0 0 „ £3 2 6	£2 15 0
Kerr's Pink	£3 0 0 „ £3 7 6	£2 15 0 to £3 0 0
Majestic	£3 0 0 „ £3 5 0	—

The supplies of potatoes marketed for local consumption during the month under review also showed a tendency to decline, and weekly average prices at markets followed much the same trend as growers' prices, easing from the improved levels of the first half of April, but finishing above the figure ruling at the end of March. The average price at markets for the month of April was 3/6¼d. per cwt. for all classes of the main crop, as against 2/10¾d. for the previous month and 2/7½d. for the month of April, 1938.

Other Vegetables.—At local markets during April supplies of pamphrey and cauliflowers were generally larger than in the previous month, and whilst leeks were little changed in supply, savoys were much scarcer and parsley, carrots, parsnips and garden turnips also showed reductions. The average prices weighted on the quantities marketed were dearer, pamphrey improving by 4¾d. to 2/-; cauliflowers by 7¼d. to 3/-, and savoys by 5d. to 1/10½d. per dozen; leeks by 2d. to 9½d., and parsley by 1½d. to 1/6d. per bunch; garden turnips by ½d. to 1/-; carrots by 2/0¼d. to 11/9½d., and parsnips by 1/1½d. to 8/7½d. per cwt.

LIVE STOCK.

CATTLE.—Store cattle remained in normally good health, but they are generally rather thin and backward in condition, outliers in particular faring badly from the cold weather and the general shortage of grass. Hand feeding was, therefore, done on a larger scale than usual, especially in the case of cattle being fattened for sale in the early summer.

Supplies of store cattle at fairs held at Northern Ireland centres during April were generally of medium dimensions, but quality and condition were not up to the usual standard. Prices for the relatively few good animals were well maintained, but the bulk of the offerings sold at unchanged to cheaper rates.

The condition and health of dairy cattle were, on the whole, well maintained and calving was satisfactory. Owing to the scarcity of roots, the rather inferior quality of the hay and straw and the lateness of the pastures, however, some animals are on the thin side and the milk yields, while showing a seasonal increase, are still a little below normal.

Offerings of dairy cattle at fairs held during April continued small and, with quality below average, trade was rather dull. A slight improvement was, however, noticeable towards the end of the month, and the best animals were occasionally quoted higher.

SHEEP.—Lambing made good progress during April, and it is now nearing completion, only a comparatively small number of the Blackface ewes in mountain districts still carrying their lambs. The crop of lambs has been very satisfactory, and in some cases it was even better than last year's crop. Losses, generally, were not abnormal, but in a few instances the mortality rate was high owing to liver-fluke disease, the poor condition of the ewes at lambing time, and the consequent lack of milk. Convulsions in newly-born lambs, and "wool-ball" in older lambs, have also caused trouble on some farms. The general shortage of "keep" on the pastures was also felt by most flocks.

Slightly larger supplies of sheep at fairs and markets last month encountered a fairly good demand, especially in the case of fat animals ready for slaughtering. Heavier offerings of spring lambs were in keen request. Prices, as a rule, were well maintained at previous levels.

PIGS.—Normal supplies of young pigs were an irregular trade, but prices as a rule fluctuated around previous quotations, and ranged in price from 20/- to 45/- each according to age and quality. The small numbers of brood sows exposed for sale were in variable request, and sales were effected at rather easier rates of from £5 to £11 per head.

The demand from curers for dead pigs was good, and supplies were generally on the small side, but towards the end of the month they increased, as many producers marketed pigs at lighter weights than usual.

The weekly returns of (1) shipments of live pigs to Great Britain, and (2) purchases of dead and live pigs in Northern Ireland last month are compared hereunder, with corresponding details for 1938 in brackets.

Week ended	(1) Shipments to Great Britain.		(2) Bought dead and alive for curing in Northern Ireland.				Total	
			Dead		Alive			
8/4/39	915	(1,610)	8,764	(9,086)	6,727	(3,219)	16,406	(13,915)
15/4/39	818	(1,757)	7,187	(8,318)	5,328	(2,996)	13,333	(13,071)
22/4/39	977	(1,559)	9,167	(7,504)	5,835	(2,710)	15,979	(11,773)
29/4/39	956	(1,597)	8,368	(10,137)	5,831	(3,593)	15,155	(15,327)
17 weeks ended 29/4/39	17,019	(34,409)	137,774	(145,313)	95,992	(47,402)	250,785	(227,124)

POULTRY.—At local markets supplies of live poultry included a reduced number of chickens, but hens were increased. The average price of chickens per head was 1½d. higher than in March at 2/11¼d. and hens were unchanged at 1/8¼d. The comparatively small numbers of ducks showed a decline on the month, and the average price cheapened by 3¼d. to 2/1¾d. per head.

From returns collected from the wholesale merchants during April prices showed little change from the previous month, and the general ranges of prices obtained by producers on a live weight basis were—spring chickens, 10d. to 11d.; winter chickens, 9d. to 10¼d.; hens and ducks, 5d. to 6d.

HORSES.—The demand for farm horses continued quiet during April. First class draught animals were in rather smaller supply than usual, and were more easily sold, but secondary types and younger animals were forward in excess of requirements. Quotations for good farm horses ranged from £25 to £42 10s., while older animals fetched from £10 to £30 per head according to quality. Younger animals were selling at prices of from £10 to £15 for foals, and £18 to £30 per head for unbroken colts.

DAIRY PRODUCE.

MILK.—On the whole the milk yields remained rather below normal last month. The cold winds and the scarcity of grass, combined with the dearth of roots and the rather inferior quality of much of the hay and straw for fodder have tended to reduce yields. There was, of course, a seasonal increase in most areas, and in a few districts the quantities of milk available are reported to be up to or even above normal dimensions.

The prices paid by creameries for milk delivered during April were slightly lower than those prevailing in March, and ranged from 4d. to 6d. per gallon, the separated milk being returned to the farmer. The rate of equalisation payment in accordance with the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938, for milk produced in Northern Ireland, and delivered to the creameries for manufacturing purposes, has been determined at 0.50d. per gallon for the month of March, 1939.

It should be noted that, under the regulations, creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

BUTTER.—Farmers' print and lump butter were, in the aggregate, slightly more plentiful at markets held during last month than in March, and average prices were unaltered at 1/3½d. per lb. for print, and 1/1½d. for lump.

EGGS.—Supplies of hen and duck eggs at certain representative market centres in Northern Ireland were consistently heavier in April than in March. Seasonal increases recorded during each week of March continued until the first week of April, since when the supply has remained fairly constant at much higher figures than those recorded a year ago. The prices as fixed by the Ministry of Agriculture for eggs showed advances up to the third week of the month. The table of fixed prices appears on page 31.

LIVE STOCK CENSUS, APRIL 1939.

A further quarterly census of live stock was taken at the 1st April, last. The census was taken on lines similar to those in October and April of last year, and in the same months in 1937, 1936 and 1935. Forms were sent to some 19,000 farmers with a request that they should supply particulars of the number of cattle, sheep and pigs on their farms at the 1st April, 1939, and 10,000 made returns. The numbers of live stock in Northern Ireland were estimated from these returns.

The result of the estimate, together with the estimated number of live stock at the 1st April, 1938, and the numbers returned at the complete enumeration at the 1st June, 1938, and the 1st January, 1939, are shown in the table below with the percentage changes which have occurred in the numbers since each of those dates.

	1st April, 1939	1st January, 1939	1st June, 1938	1st April, 1938	% Increase April, 1939, as compared with		
					January, 1939	June, 1938	April, 1938
Cows in milk ...	162,000	159,655	229,262	224,000	+1.5	+4.2	+6.7
Cows in calf but not in milk ...	77,000	79,054			−2.6		
Heifers in calf ...	42,000	39,791	30,085	40,000	+5.6	+39.6	+5.0
Other Cattle ...	428,000	422,064	475,283	419,000	+1.4	−9.4	+2.2
Total Cattle ...	709,000	700,564	731,930	683,000	+1.2	−3.1	+3.8
Ewes ...	396,000	436,710	401,850	398,000	−9.3	−1.5	−0.5
Other Sheep ...	415,000	114,552	491,581	430,000	+262.3	−15.6	−3.5
Total Sheep ...	811,000	551,262	893,431	828,000	+47.1	−9.2	−2.1
Sows ...	63,000	59,848	57,886	56,000	+5.3	+8.8	+12.5
Other Pigs ...	549,000	505,878	503,613	486,000	+8.5	+9.0	+13.0
Total Pigs ...	612,000	565,726	561,499	542,000	+8.2	+9.0	+12.9

THE AGRICULTURAL OUTPUT OF NORTHERN IRELAND FROM 1930-31 TO 1937-38.

Estimates of the agricultural output of Northern Ireland from 1930-31 to 1935-36 were published in the Monthly Report for March, 1938, and this article is intended to add to the above series estimates which are now available for 1936-37 and 1937-38. For the purpose of these estimates the output of any farm product represents the amount of that product which is sold off farms, together with the amount of the product which is consumed as such in farm households; the whole of the agricultural area is treated as though it were one large farm and sales of stock from one farmer to another in Northern Ireland are thus not considered as part of the output.

As was explained in the March, 1938, number of this Report, the estimates are based on information obtained from a number of sources, which include direct enquiries from farms, the annual censuses of the acreage under crops and the numbers of livestock, annual estimates supplied by the agricultural instructors regarding the yield of crops, and, lastly, certain returns relating for instance to the number of pigs sold for curing or to the quantity of milk sold to creameries and for liquid consumption which have been made available under the various marketing acts and schemes.

Of these sources the direct enquiries of the Ministry as to the output of certain products in various years, require a brief consideration. It will be recalled that in 1925 and 1930 special enquiries amounting to a census of agricultural production were made in Northern Ireland as to the output of each class of agricultural produce in those years. Since 1935 the Ministry's practice has been to spread such enquiries over several years so that information regarding some part of the output is collected each year. Accordingly, at the 1st June, 1937, the Ministry held a special enquiry as to the quantity of butter manufactured on farms, and the data obtained in this way has been used together with data obtained from the creameries to estimate the output of milk for manufacture during 1936-37 and 1937-38. Similarly, at 1st June, 1937, an enquiry as to the production of eggs was carried out, and this information has also been used for estimating the output of eggs during the last two years under review.

THE VALUE OF THE OUTPUT.

Table I. shows the value of the output of each product and the value of the gross output for each of the years 1930-31 to 1937-38. It may be seen that the value of the gross output has increased rapidly and consistently since the depression year of 1932-33. In 1937-38 it reached a record figure of £16,413,000 and exceeded the figure for 1932-33 by over 6 million pounds.

This increase reflects an increase in the value of the output of live stock and live stock products rather than of field crops. The income from field crops has increased by £950,000 since 1932-33, but reached its peak in 1936-37 when it amounted to £3,029,000, declining to £2,125,000 in the following year. As may be seen from Table I., the value of the output of field crops reflects very closely the changes in the quantity and price of potatoes, which form approximately 64% of the total value of the output of crops.

The income from live stock and live stock products has, on the other hand, increased by approximately 5 million pounds since 1932-33. This increase is attributable principally to increases in the value of the output of pigs, which have increased by 3 million pounds since 1932-33, but incomes from eggs, poultry and cattle have also shown substantial increases. The increase in the value of the output of pigs is due, of course, to the stable prices provided under the Marketing Scheme, and to quantitative regulation which has provided an expanding market for bacon in the United Kingdom.

The increase in the value of cattle is explained by the fact that Northern Ireland producers have been encouraged by the subsidy on fat cattle to finish more and more of their animals in this country rather than to send them for fattening to Great Britain. Similarly, the steady increase in the income from poultry and eggs seems to be largely due to the operation of the various Acts for regulating and marketing of eggs.

So much for changes in the value of the output since 1932-33. As for the last two years under review it is apparent that the value of the output has increased by £318,000. There was a decrease of £900,000 in the income from field crops mainly as a result of a fall in the price and output of potatoes. The output of live stock and live stock products, however, increased by slightly over 1 million pounds, increases in the value of the output of pigs, poultry and eggs coinciding with a slight decrease in the value of the output of cattle. The income from pigs alone increased from £3,694,000 to £4,405,000 and the income from milk sold for liquid consumption increased by nearly £200,000 as a result of the increase in price which producers secured at the beginning of 1937-38.

TABLE I. The Estimated Value of the Agricultural Output of Northern Ireland, 1930-31 to 1937-38.

Commodity.	1930-31 £000	1931-32 £000	1932-33 £000	1933-34 £000	1934-35 £000	1935-36 £000	1936-37 £000	1937-38 £000
Livestock and Livestock Products—								
Cattle	2,477	2,096	2,177	1,976	2,028	2,562	2,779	2,662
Sheep	515	487	403	435	467	476	540	581
Pigs	1,437	1,141	1,236	1,796	2,343	2,995	3,694	4,405
Poultry	927	953	850	806	856	940	944	1,020
Eggs (Hen and Duck)	2,167	2,029	1,935	2,011	1,987	2,147	2,307	2,467
Wool	31	31.5	17	27.5	34.5	39	58	105
Feathers	23	22	20	18	20	23	36	27
Milk (whole)	1,500	1,712	1,620	1,395	1,631	1,567	1,775	1,967
Milk converted into butter and cream	1,173	1,054	939	822	830	828	933	1,054
Total Livestock and Livestock Products	10,250	9,525.5	9,197	9,286.5	10,196.5	11,577	13,066	14,288
Field Crops								
Wheat	37	21.5	15	25	43.5	45.5	56	35
Oats	51	99.5	102	131.5	157	148	182	163
Barley	10.5	4	3.5	4	8	9	11	9
Potatoes	1,750	2,442	677	862	1,053	1,858	2,021	1,293
Flax	215	77	74	152	293	482	380	331
Hay	54	50	53	48	49	52	55	44
Straw	22	20	18	16	17	19	20	17
Grass Seed	380	292	234.5	416	488	325	304	233
Total Field Crops	2,519.5	3,006	1,177	1,654.5	2,108.5	2,938.5	3,029	2,125
Total Livestock, Livestock Products and Field Crops	12,769.5	12,531.5	10,374	10,941	12,305	14,515.5	16,095	16,413
State Subsidies	£	£	£	£	£	£	£	£
Wheat	—	—	6,463	19,244	31,281	25,376	4,691	2,400
Milk	—	—	—	—	183,076	155,291	120,721	86,800
Cattle	—	—	—	—	161,333	285,769	260,496	208,850
Total State Subsidies	—	—	6,463	19,244	375,690	466,436	385,908	298,050
Grand Total	12,769,500	12,531,500	10,380,463	10,960,244	12,680,690	14,981,936	16,501,908	16,711,050

State Subsidies.

If State subsidies are taken into account the gross value of the output in 1937-38 was £16,700,000. The total amount of subsidy paid to Northern Ireland farmers between 1932-33, when the Wheat Act first came into operation, and 1937-38 was £1,551,791.

The Volume of the Output and the Price Level.

Changes in the value of the output are due, on the one hand, to changes in the price level, and on the other to changes in the quantities of the various products sold off farms, and it is interesting to consider the relative weight of each of these influences in bringing about the increase in the value of the output during the last seven years. The influence of changing prices has been measured by means of the agricultural price index number, described in the Monthly Report for February. The index is based on the years 1927-29, and shows how far changes in the value of the output are due to changes in the prices of the various products sold off farms. The figures are given below:—

1927-29	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38
100	88	85.5	79.5	69.5	69.5	71.5	77	83.5

A similar index number has been constructed for the volume of the output. How far the total volume of the output has increased during the last few years cannot be answered simply, since great hundreds of eggs, gallons of milk and numbers of fat cattle cannot be added together to give a comprehensible answer, but some attempt may be made to answer the question if it is put in this way. Suppose prices had not changed since 1927-29, how far would the value of the output have changed on account of changing quantities sold off farms? If the output of each commodity in successive years is valued at the prices of 1927-29, the resulting total values give an answer to this question, and these can be shown in the form of an index number, i.e., as percentages of the total value in the period 1927-29. The figures calculated in this way are shown below, and it appears that if prices had not changed since 1927-29 the value of the output would still have increased by 32 per cent. on account of the larger quantities disposed of.

1927-29	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38
100	99	98	104	110	121	136	139	132

It may be seen that the index number has risen by 28 points since 1932-33. The increase in the volume of the output was rapid between 1932-33 and 1935-36, but in the last three years it has not varied substantially although a fall of seven points is apparent between 1936-37 and 1937-38.

TABLE II.

The Estimated Volume of the Agricultural Output of Northern Ireland,

1930-31 to 1937-38.

Commodity.	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38
Livestock and Livestock Products								
Cattle ... ... No.	173,420	149,964	170,429	156,999	162,751	221,695	224,935	177,305
Sheep ... ... ,,	261,493	360,949	383,391	350,626	321,859	366,151	369,375	343,610
Pigs ... ... ,,	250,000	263,000	293,000	375,000	517,000	664,000	759,000	811,000
Poultry ... ... ,,	5,460,000	5,343,000	5,865,000	6,445,000	6,690,000	6,540,000	6,863,000	6,785,000
Eggs (Hen and Duck) ... Gt. hd.	3,969,000	4,035,000	4,167,000	4,421,000	4,610,000	4,525,000	4,608,000	4,375,000
Wool ... ... lb.	2,000,000	2,000,000	2,025,000	1,875,000	1,950,000	2,075,000	2,135,000	2,100,000
Feathers ... ... cwt.	3,134	4,919	4,776	4,766	5,889	6,638	8,605	7,240
Milk (whole) ... ... gals.	30,000,000	29,500,000	30,000,000	30,000,000	30,500,000	30,500,000	31,000,000	31,000,000
Milk converted into butter and cream ... ... ,,	60,078,000	59,106,000	59,772,000	60,134,000	60,174,000	52,391,000	53,140,000	51,452,000
Field Crops								
Wheat ... ... cwt.	85,000	50,000	53,000	104,000	176,000	180,000	137,500	77,000
Oats ... ... ,,	172,000	255,000	430,500	526,000	570,000	573,000	555,000	454,000
Barley ... ... ,,	28,000	12,000	10,000	12,000	22,000	28,000	25,000	21,500
Potatoes ... ... ton	430,000	442,000	459,000	437,000	438,000	548,000	510,000	491,000
Flax ... ... ,,	5,360	1,380	1,150	2,175	3,675	6,900	5,033	4,187
Hay ... ... ,,	21,000	19,500	20,000	20,000	19,000	18,000	17,000	15,000
Straw ... ... ,,	10,500	10,000	10,000	10,000	9,500	9,000	8,500	7,500
Grass Seed ... ... cwt.	555,000	548,000	443,000	382,000	476,000	477,000	423,000	452,000

This apparent increase in the total volume of the output can be best understood in the light of Table II., which shows the actual quantities of various products sold off farms during the eight years under review. From this table it is evident that the increase in the volume of the output is largely due to the expansion in pig production which occurred between 1932-33 and 1937-38. This expansion has been consistent throughout the period and in 1937-38 it may be seen that the output of pigs was nearly three times the output in 1932-33 (in precise figures 277 per cent.). The output of poultry has also increased substantially, showing a 16 per cent. increase between 1932-33 and 1937-38. The output of cattle increased by per 32 per cent. between 1932-33 and 1936-37, but, as a result of heavy slaughterings in the latter year, it is not surprising that the high output was not maintained but decreased in 1937-38 to a figure of 177,305.

Summary and Conclusion.

The index numbers showing changes in the volume of the output and the price level are shown in Table III. side by side with an index of the value of the output. As compared with 1926-27—1928-29, which it has now been agreed were years of comparative prosperity for agriculture in Northern Ireland, it appears that the total value of the output had by 1937-38 increased by 12 per cent. and, if subsidies are included, by 14 per cent. This increase, it appears, reflects an expansion of 32 per cent. in the actual quantities of produce sold off farms (column 3) but has been accompanied by a fall of 17 per cent. in the price level (column 2).

TABLE III.

Year	Index of Value.		Index of Price.		Index of Quantity
	Excluding Subsidies.	Including Subsidies.	Excluding Subsidies.	Including Subsidies.	
1926-27 to 1928-29	100	*	100	*	100
1930-31	87	*	88	*	99
1931-32	86	*	86	*	98
1932-33	71	71	79	80	104
1933-34	75	75	70	70	110
1934-35	84	87	70	71	121
1935-36	99	102	72	73	136
1936-37	110	113	77	78	139
1937-38	112	114	84	85	132

* No direct subsidies were paid to producers in Northern Ireland during these years, the first measure of direct assistance in respect of a marketable commodity being the Wheat Act, 1932.

Prices fell very rapidly between the base period and 1933-34. Since the latter year the index number shows an increase in the price level from 70 to 84, or, if subsidies are included, from 70 to 85. A striking fact which is brought out by this table is that, though the price level was 30 points lower in 1933-34 than it was in the base period, the output was actually 10 points higher. This throws light on an economic truth about agriculture's reaction to depression, namely, that when agricultural prices fall, the farmer, unlike the industrial employer, does not contract his production, but tends rather to work harder, produce more and hopes by that means to make up in increased output what he loses by falling prices.

EDUCATIONAL EXHIBIT.

As in previous years, the Ministry's Educational Exhibit will be staged in the Central Exhibition Hall and Annexe at the Royal Ulster Agricultural Society's Show, which will be held at Balmoral, on Wednesday, Thursday, Friday and Saturday, May 24th, 25th, 26th and 27th. A new feature of the Exhibit will be the showing of educational films relating to agricultural matters. These films will be shown in the Annexe, at intervals throughout the days on which the Show is held.

This year, horticulture will form the central exhibit in the main hall. A commercial tomato house has been erected, and growers will have an opportunity of seeing a suitable type of house, and also the various stages in the growth of tomatoes under glass from the sowing of the seed to the fruiting stage. Two systems of propagating tomatoes, thin sowing and thick sowing, will be shown, as will also the subsequent cultural operations necessary in the case of each system.

The other main exhibits in the main hall will deal with field crops, poultry-keeping and egg marketing, dairying, forestry, diseases and pests of crops and of stock, the Land Improvement Scheme, the Land Fertility Scheme, and farm accounts. The type of instruction given at the Agricultural Colleges and Schools and at classes, for sons and daughters of farmers will also be demonstrated.

Animals with which feeding and management experiments have been carried out to demonstrate particular methods of feeding and management, will be stalled in the Annexe.

Field Crops.—Good grassland is the basis of successful farming. The importance of soil fertility, seed quality and strain and management as interdependent factors in obtaining and maintaining good pasture will be shown. The independent and combined effects of these factors will be shown by turves taken from fields in various parts of Northern Ireland. Re-seeding of land to pasture without a nurse crop will also be demonstrated. The methods employed in examining and testing seeds for sowing will be shown.

The Plant Breeding Exhibit will illustrate the improvement which has been brought about in the flax crop, mainly from the production of improved strains of seed. Numerous varieties of oats, barley and wheat will also be displayed in this Exhibit.

The Potato Section will deal specifically with the production and management of seed potatoes for export. Blight infection of tubers is a serious menace to the development of the seed trade in potatoes, and methods of avoiding this trouble will be shown. One method is the destruction of the

foliage before the crop reaches maturity. The effects of different chemical solutions for foliage destruction on plots of potato plants will be demonstrated. The advantages of pitting ware and seed-size tubers separately at digging time, particularly to those catering for the seed export trade, will also be stressed. In addition, samples of some of the newer varieties of potatoes will be on view.

Poultry-Keeping and Egg Marketing.—The importance in successful poultry-keeping of providing clean ground for the birds—both young and old—will be specially stressed in this exhibit. The rotation of poultry stocks around the farm "after the plough", and, in addition, their constant rotation in individual fields will be illustrated. The influence which the use of sound breeding stock, proper feeding and good management have on the health of the succeeding generation will also be illustrated. Information will be available on proper management methods during the rearing stages and on suitable rations to feed.

In the Egg Marketing Section prominence will be given to the chief causes of the appearance of "Seconds" eggs, and information will be available on how the production of such eggs may be avoided. As a result of tests carried out last year changes have been made in the specification for egg cases, and both the old and the new types of cases will be displayed.

Another feature of this stand will be an exhibit showing the advantages of selling live chickens by weight instead of on a per head basis.

Demonstrations of the testing or candling of eggs to ascertain their quality and freshness will be given at intervals in the Annexe.

Dairying, Milk Production, etc.—In this exhibit emphasis will be laid on the essentials for clean milk production, and attention will be drawn to the advantages which exist in regard to Grade C. milk production by creamery suppliers.

The value of milk as a food will be stressed, and a comparison of the quantities of milk consumed in various countries will be shown. Exhibits dealing with common problems relating to the sale of milk will also be shown. In addition the marketing of butter and cream will be dealt with.

Forestry.—The central exhibit in this section will be devoted to the damage caused to timber by wood-boring insects and by dry-rot. Good building construction ensures freedom from dry-rot, and model sections of buildings will be on view illustrating proper and defective methods of construction. Photographs of wood-boring insects and typical examples of the damage which they cause will be shown.

The species of trees distributed to farmers each year under the Ministry's Forestry Scheme, at 30/- per 1,000, will form another section of this exhibit, while specimens of other species suitable for planting for shelter and ornament in Northern Ireland will also be shown.

Diseases and Pests of Crops and Stock.—A special feature of the exhibits staged in this section will be a display of tomato diseases and pests. Information will be available to growers on methods of prevention and control. The control of the diseases and pests of vegetable crops will also be featured.

The decline in the production of strawberries in Northern Ireland in recent years is largely due to two virus diseases. An exhibit designed to enable growers to recognise the symptoms of these diseases as they appear in certain varieties will be staged. Plants of other strawberry varieties in which visible symptoms of these virus diseases are not readily discernable will also be shown.

Examples and methods of control of the more important diseases of the potato crop, and of seed borne diseases of oats and flax, will form another interesting display.

An exhibit will deal with Potato Eelworm, which commonly causes "potato sickness" in gardens and allotments, while that destructive pest of Chrysanthemums the "Chrysanthemum Midge" will be the feature of an exhibit, the purpose of which is to acquaint the public with the means by which the insect can be recognised.

The terms of the Warble Fly Order and the necessity for complying rigidly with the Order will be brought to the notice of farmers in an exhibit dealing with warble fly infestation of cattle.

Infestations of farm stock by parasites constitute one of the most serious problems in the live stock industry to-day. Measures for the control of these parasites will be featured in an exhibit to be staged by the Veterinary Research Division. Piglet influenza and its control will also occupy a prominent place in this exhibit. Other diseases and ailments of farm stock which will be dealt with are anthrax, sterility, "wool-ball" in lambs, and the common poultry diseases.

Land Improvement Scheme.—A small exhibit will indicate the work which has been done and which could be done under this scheme. Photographs of actual work carried out, and for which grants have been paid, will be shown.

Information regarding the various Loan Schemes administered by the Ministry will be available.

Land Fertility Scheme.—The importance of taking advantage of this Scheme to obtain supplies of lime at reduced rates will be demonstrated.

Proper methods of spreading burnt lime will be contrasted, and information will be available on the use of other forms of lime.

Farm Accounts.—For a number of years the Ministry has operated a Scheme, the object of which is to obtain actual costings accounts in respect of typical farms in Northern Ireland. A number of accounts from such farms will be displayed to show the advantages of farmers availing themselves of the opportunity to have costings carried out.

Livestock.—In the Annexe, bullocks from a fattening experiment will be on view. The results and returns obtained from one lot receiving a normal allowance of meals will be compared with those from a second lot fed on the same meal ration, a portion of which, however, was substituted by raw potatoes. Methods of rearing calves will also be illustrated with experimental animals.

The economy of limiting the amount of meals consumed by pigs in the final stages of growth, and the results obtained from different methods of feeding the ration will be shown.

Publications.—Copies of leaflets and other publications issued by the Ministry will be available at the leaflet stand in the main hall.

The British Broadcasting Corporation and His Majesty's Stationery Office will also have stands in the main hall.

The Exhibit will be open to the public as follows:—

Wednesday, 24th May, from 10 a.m. to 6 p.m.
Thursday, 25th May, from 10 a.m. to 9.30 p.m.
Friday, 26th May, from 10 a.m. to 6 p.m.
Saturday, 27th May, from 10 a.m. to 6 p.m.

HOW TO GET TOP PRICE FOR EGGS.

The following talk was given by Mr. R. F. Thompson of the Ministry, from the Belfast Studio of the British Broadcasting Corporation, on Tuesday, 25th April. The permission of the B.B.C. to reprint the talk is gratefully acknowledged.

This subject is one which should interest most people who are in any way associated with the industry, from the poultry-keeper who obtains the weekly fixed price to the Class A merchant who packs and sells the eggs. A good deal of misunderstanding seems to exist as to how the weekly fixed price paid for eggs in Northern Ireland is arrived at, and very often the Ministry or the Egg Marketing Committee are blamed if prices do not compare favourably with corresponding periods in previous years.

In the first place it should be clearly understood that the fixed weekly price of eggs, as payable to producers in any week, is simply the price obtained for the eggs on the wholesale markets, less the margin allowed to merchants for their costs and services. It should, therefore, be appreciated that the actions of the Ministry or the Egg Marketing Committee in fixing prices are ruled by the conditions in the wholesale market and contrary to the views held in some circles, they cannot fix the price to suit requirements. In point of fact their main endeavour is to see that the most efficient and economical methods of collection, handling and marketing are carried out, and by so doing ensure that Northern Ireland eggs bear favourable comparison with any other class with which they are in competition. This having been done, it only remains for the Committee to apportion the realised price, paying the merchant for his services and giving the producer his fair share. In other words, the price the merchant is able to obtain is directly related to the price paid to the producer. There are, of course, a number of very important factors affecting the price which merchants obtain. The two most important are probably the quality of the eggs, and the selling ability of the merchants. The quality of the eggs is largely a matter for producers, but provided the quality is right the responsibility for selling rests with the Class A merchants or packers. As the chief object of the Egg Marketing Scheme is to get better prices, producers are being encouraged to improve quality by the method of payment on a quality basis; that is, by having deductions made for "Seconds", "Rejects" and soiled eggs. The merchants are encouraged to obtain the best possible price by knowing that if they do not sell as well as the average of other merchants, the difference must come out of the margin of about 6½d. per long hundred allowed to cover cost of handling, which includes everything, with the exception of collection and the actual cost of cases and packing materials. If any merchant, therefore, sells at 3d. or 6d. per hundred less than the average, he has very little left out of the 6½d. with which to meet his expenses.

Reference has already been made to producers or poultry-keepers who obtain the weekly fixed price, but there are others who are actually receiving less by having deductions made for "Seconds", "Rejects" or soiled eggs. To those producers who are affected by such deductions it is desirable to offer some advice, because there is no reason why they should continue to sell anything but eggs which are really first quality. The fact that a large number have not yet had any deductions in respect of "Seconds", and that a further number who experienced trouble at first are now having satisfactory results, shows what can be done. The Egg Marketing Committee, on which the producers are represented, realised that if progress was to be made in improving the quality and appearance of Northern Ireland eggs, the deductions for "Seconds" and soiled eggs must be substantial, as otherwise some producers would not strive to market all their supplies as first quality, and it is reasonable to expect that should the Committee have grounds for believing at any time that further improvements can be made by increasing the amount of the deductions, they will be quite prepared to tender such advice.

Certain producers complain that merchants are making a profit on "Seconds" as the deductions are greater than their loss on the sale of these eggs, but such is not the case. It is true the merchants do pay less for "Seconds" than the actual market value for the time being, but sales of "Seconds" by the merchants are returned weekly, and the profit gained is carried into the balance to increase the price for fresh or new-laid eggs.

Much advice has already been given on methods of preventing "Seconds", "Rejects" and soiled eggs, but it will not be out of place to cover the same ground again by stating briefly how most of the trouble can be prevented. With the soiled eggs it is only a matter of keeping the nests and approaches as clean as possible, collecting the eggs regularly from the nests and cleaning, where cleaning is needed, as soon after collection as possible. A cloth taken from clean cold water should be used, with a little salt or baking soda if necessary for removing stains, and the eggs dried properly with a clean, dry cloth. More soiled eggs are marketed in the winter months than in late spring and summer. This is partly because of more unfavourable weather conditions, with consequent dirtier surroundings, and partly because of the shorter days when the eggs are usually cleaned by artificial light. Very often producers complain that deductions have been made for soiled eggs when they do not believe they could have been soiled. On investigation it is often found that the eggs were cleaned by artificial light and not examined again in daylight. This is, therefore, a matter on which greater care could be taken. Most producers consider ½d. per lb. means a great deal to them, but to lose ½d. for each egg not properly cleaned is surely a loss which could easily be prevented. In this connection a word of warning may be added. The Ministry of Agriculture have still power to prosecute for offering unclean

or stained eggs for sale, and although it is not desirous of taking this line of action, it will be quite prepared to exercise its authority in this respect if producers continue to offer such eggs for sale.

Eggs which are classified as "Seconds" because of quality are of almost negligible quantity during the winter months, but with the near approach of longer days and hotter weather, a reminder as to the various types and how to prevent them should be helpful now. Firstly, it should be remembered that fertile eggs are liable to become "Seconds" more quickly than infertile. Roosters should therefore be removed from the laying flocks immediately the hatching season is over. Incubation can be prevented by collecting eggs two or three times daily from the nests and storing in a cool place. The stale type of "Second" can be prevented by marketing regularly and often. The mottled type, usually caused by steeping and washing, can be prevented by proper cleaning. In all cases a cool, properly ventilated room or store should be provided for keeping eggs until they are sold. If these rules are observed no trouble should be experienced.

"Reject" eggs are now almost a thing of the past, except for the small percentage of blood clots which cannot be prevented.

It is gratifying to record that since the introduction of the purchase of eggs on a quality basis the general improvement in quality, and the consequent reduction in the number of "Seconds" have been most marked. By general improvement in quality is meant that the number of eggs bordering on "Second" quality has been greatly reduced. While this fact gives great cause for satisfaction it should be noted that there is room for further improvement; there is no reason why "Seconds" cannot be wiped out altogether, with the exception, of course, of the few due to the presence of blood spots.

Another type of egg which has not been previously mentioned, and which is now even greater in numbers than soiled eggs and "Seconds" combined, is the cracked egg. Most producers will disclaim responsibility for cracked eggs, but it is a fact that on close examination most consignments are found to contain cracked eggs, and among many lots an excessive number is found. This is due to the fact that most of the cracks are probably hair cracks, and not noticeable at the time of sale by the producers, but when the eggs have been carried for a distance the cracks are liable to become worse, and on arrival at the packer's store these cracked eggs have to be removed by the merchants and sold at a reduced price. This loss will in future be taken into account in fixing the statutory price, and will thereby fall on producers. The immediate question now is, therefore, how are hair cracks caused and how can they be prevented. Experience generally shows that the principal causes are careless handling, particularly in cleaning, carrying in buckets, or allowing hens to lay on to hard bottomed nests. The remedies here are obvious.

In addition, cracks may be caused by careless handling in collection and using broken fillers or torn flats. Hand made fillers, wire stitched at the corners are very suitable for collection purposes, and are cheaper in the long run than the ordinary type, which are so easily broken.

The final question to be dealt with here is how some producers may obtain more than the minimum fixed or statutory price for their eggs. It is taken for granted that all producers know that they should receive ½d. per lb. above the statutory price for hen eggs delivered direct to a packer's registered store or recognised depot, and ¾d. per dozen above the statutory price for every complete dozen of duck eggs delivered in the same way. Further to this producers will be pleased to learn from a recent Order freeing the retail market from price fixing regulations that all retailers, apart from those who are also wholesale merchants, may now pay producers any price they wish above the statutory price, and this applies whether the eggs are delivered to the premises of the retailer or collected by him at the producer's premises. In other words, the statutory price can be regarded purely as a minimum for those producers selling direct to persons solely in the retail trade. A further channel of trade open to the producer desirous of obtaining the best price he can get is by direct sales to the consumer. Here the only requirement is that the eggs must be clean and fresh.

Regarding the selling of eggs by Class A merchants, there are a number who require very little advice on the subject of how to obtain top prices for eggs, but there are others who remain fairly consistently below the average. One way by which these merchants could possibly improve their selling would be by making personal contact with cross-channel buyers. It is known that most of the go-ahead merchants make a point of visiting their customers at regular intervals, and at the same time looking out for new buyers who are likely to take regular supplies. Northern Ireland eggs, once introduced, soon establish confidence, and top prices can thus be obtained. It is strongly felt that the personal introduction of Northern Ireland eggs in this way will prove profitable to the merchant, and redound to the benefit of the general trade.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

PIG PRICES FOR MAY, 1939.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

Prices for Dead Pigs.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in May, 1939, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	63/5	60/5	57/5	53/5	5/- below relevant Grade Price.
c.1.1.14 to c.1.2.3	67/5	64/5	61/5	57/5	
Weight Class. (Dead Weight)	Grade A	Grade B	Grade C	U.L. or U.F.	
c.1.2.4 to c.1.2.14	67/5	64/5	61/5	58/5	
c.1.2.15 to c.1.3.14	67/5	64/5	61/5	58/5	
c.1.3.15 to c.2.0.0	64/5	61/5	58/5	55/5	
c.2.0.1 to c.2.0.14	58/5	55/5	52/5	49/5	

Pig Carcases c.1.0.0 to c.1.0.20—60/5

(*N.B. These prices are the same as those fixed for April,* 1939).

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease

the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14 and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction and pig carcases badly abused or damaged before being handed over by the producer to the curer.

PRICES FOR PIGS SOLD ALIVE ON DIRECT CONTRACT TO WILTSHIRE CURERS IN NORTHERN IRELAND, AND FOR PIGS SOLD ALIVE TO THE PIGS MARKETING BOARD (NORTHERN IRELAND) AND RESOLD TO WILTSHIRE CURERS IN NORTHERN IRELAND.

In the case of pigs sold alive to Wiltshire curers under direct contract, or sold to the Pigs Marketing Board and resold to Wiltshire Curers, the prices per dead cwt. during May, 1939, are as follows:—

Weight Class (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	72/5	69/5	66/5	62/5	59/5
c.1.1.14 to c.1.2.3	72/5	69/5	66/5	62/5	59/5
	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.7	69/5	66/5	63/5	60/5	
c.1.0.0 to c.1.0.20	Suitable 61/5		Unsuitable 59/5		
Over c.1.2.7	On the same basis as pigs sold dead.				

(*N.B. These prices are the same as those fixed for April*, 1939).

PRICES FOR PIGS SOLD ALIVE TO THE PIGS MARKETING BOARD (NORTHERN IRELAND) AND NOT RESOLD TO WILTSHIRE CURERS IN NORTHERN IRELAND.

In the case of pigs sold alive to the Pigs Marketing Board during May, 1939, and not resold to Wiltshire curers, the prices per live cwt., according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.		Unsuitable.
c.1.1.14 to c.1.2.13	46/–	46/–	46/–		44/6
c.1.2.14 to c.2.0.0	54/3	52/–	49/9	U.L. or U.F. 46/9	44/6
c.2.0.1 to c.2.1.14	47/6	45/3	43/–		40/9
c.2.1.15 to c.2.2.7	45/3	43/–	40/9		38/6
c.2.2.8 to c.2.2.21	40/9	38/6	36/3		34/–

(*N.B. These prices are the same as those fixed for April,* 1939).

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract, registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy at present amounting to 4/2d.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers or to the Board (on pigs resold to curers in Northern Ireland) to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during February, 1939.

Under c.1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3.					Totals
Suitable	Un-suitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	
1.43	.20	2.64	1.42	.41	.24	.02	5.01	5.84	2.09	1.05	.03	20.38

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
8.6	21.52	3.08	.46	6.46	20.64	4.24	1.12	1.81	7.01	.95	.19	76.08

Ungraded Carcases.						
Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U1.	Wholly black, injured or damaged U2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.08	2.02	.03	.54	.86	.01	3.54
					Total	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The volume of trade in pig carcases during the month of February showed a decline, due more to the shortness of the calendar month rather than to any seasonal change. Fixed prices for January and February were the same, and the calculated over-all average price per cwt. for February was £3 1s. 8d. The average weight, however, was 2 lbs. lighter at c.1.2.19, with the result that the average price per carcase fell by 10d. to £5 3s. 0d. per cwt.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of March, 1939.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0					.11
c.1.0.0 to c.1.0.20					.67
c.1.0.21 to c.1.2.3	47.19	32.76	8.77	2.89	91.61
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7	1.44	1.87	.61	.07	3.99
c.1.2.8 to c.1.3.14	1.12	1.69	.69	.10	3.60
Over c.1.3.14.					.02
				Total	100 %

The average net price per cwt. in respect of these deliveries works out at £3 6s. 8d. after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.20, the net average price per pig being £4 15s. 1d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 22nd April, 1939, was 8/8¾d. The average price for the similar period ended 18th March was also 8/8¾d. These figures have been calculated by the Ministry from returns collected from ten representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based :—

Maize Meal	30%
Barley Meal	30%
White Pollards	20%
White Bran	10%
Meat Meal (60% Protein) ...	10%

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

NORTHERN IRELAND EGG PRICES.

The following table shows the prices fixed by the Ministry and payable by licensed wholesale dealers for eggs purchased from producers during the weeks specified, as compared with the prices fixed for the corresponding weeks of 1938.

Week ended	1939				1938			
	Hen Eggs per lb.*		Duck Eggs per doz.*		Hen Eggs per lb.		Duck Eggs per doz.	
	s.	d.	s.	d.	s.	d.	s.	d.
April 1	0	6	0	9½	0	5¼	0	8
„ 8 ...	0	6¼	0	9½	0	5½	0	7½
„ 15	0	6½	0	9½	0	5¾	0	8
„ 22	0	7	0	10	0	6¼	0	8
„ 29	0	6	0	9	0	7	0	8½

*When hen eggs are delivered by the producer to the packing store of a licensed Wholesale Dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¾d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938.

The following were the standard deductions :—

Hen eggs : Seconds and soiled eggs, ½d. per egg.

Rejects : ¾d. per egg for hen and duck eggs during the weeks ended 1st, 8th and 15th April, during the week ended 22nd April 1d. per egg, and for the week ended 29th April ¾d. per egg.

LONDON EGG PRICES.

Return of average prices of hen eggs at London on Monday each week, furnished by the London Egg Exchange, and published in the Weekly Dairy Produce Notes of the Imperial Economic Committee.

Hen Eggs, per 120.

Description.	3/4/39	11/4/39	17/4/39	24/4/39
English National Mark				
(Specials) ...	11/9	11/9	12/3	12/3
(Standards) ...	11/–	11/–	11/9	11/9
(Mediums) ...	10/3	10/3	10/9	10/9
(Pullets)	9/3	9/3	9/9	9/9
Northern Ireland				
(Extra Specials) ...	11/6 12/–	11/6 12/–	12/6	12/3
(Specials) ...	11/–	11/– 11/3	11/9 12/–	11/9
(Standards) ...	10/6 10/9	10/6 10/9	11/4½ 11/6	11/3
(Selected) ...	9/9 10/–	10/– 10/3	10/6 10/9	10/3 10/6

PROSECUTION.

A prosecution under the Marketing of Eggs Acts of interest to poultry-keepers was heard at Dungannon Petty Session on the 24th April, before Mr. J. Long, R.M. The Ministry proved to the satisfaction of the court that a licensed wholesale egg dealer had entered short weights on identification tickets relating to eggs bought from poultry-keepers, and had also post-dated identification tickets in respect of other quantities with a view to evading the regulations relating to the holding of eggs.

Fines totalling £6 with 8/- court costs were imposed, and the Resident Magistrate told the defendant that any such offences in future would call for much heavier penalties.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary made under these Acts up to and including 29th April, 1939:—

Live Weight.	No. of Animals.	Total Amount Paid.
		£ s. d.
England and Wales	5,101,814	12,665,257 1 0
Scotland	1,563,180	4,131,033 5 2
Northern Ireland	530,130	1,136,135 2 7
TOTAL (United Kingdom)	7,195,124	17,932,425 8 9
Dead Weight.		
England and Wales	156,143	392,807 3 4
Scotland	47,848	140,791 12 2
TOTAL (Great Britain)	203,991	533,589 15 6

FAT CATTLE CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy in March, 1939, have been as follows:—

	March, 1939					Corresponding totals in	
	Home-bred		Imported		Total	March, 1938	March, 1937
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade			
England ...	22,928	41,381	4,948	18,862	88,119	83,699	97,789
Wales ...	2,924	2,837	24	94	5,879	5,074	6,736
Scotland ...	2,384	18,193	855	11,179	32,611	31,505	36,362
Northern Ireland	5,815	2,373	415	271	8,874	9,361	12,865
United Kingdom	34,051	64,784	6,242	30,406	135,483	129,639	153,752

As the great majority of fat stock markets are held on the early days of the week the rate of marketing of fat cattle cannot be judged accurately from the number of animals marketed in a calendar month. For comparative purposes appropriate weights are applied by the Livestock Commission to each day of the week, and the figures for each calendar month are adjusted accordingly, so as to allow as far as possible for the fact that a large number of markets are held on Mondays and that the number of markets held decreases day by day as the week proceeds. The adjusted figures for March, 1939, 1938 and 1937 are 136,121, 124,950 and 139,494 respectively.

The average prices per live cwt. of certified cattle in March, 1939, have been:—

	March, 1939.			Corresponding averages in	
	Ordinary Grade	Quality Grade	Average	March, 1938	March, 1937
	s. d.	s. d.	s. d.	s. d.	s. d.
England	37 1	40 1	39 2	—	—
Wales	37 1	40 0	38 7	—	—
England and Wales	37 1	40 1	39 2	43 0	36 11
Scotland	37 3	40 10	40 6	43 11	38 3
Northern Ireland	36 0	36 10	36 4	39 9	33 4
United Kingdom	36 11	40 2	39 3	43 0	36 11

WHEAT ACT, 1932.

ADVANCE PAYMENT TO REGISTERED GROWERS ON ACCOUNT OF DEFICIENCY PAYMENTS FOR 1938-39.

In accordance with Byelaw 31 of the Wheat Byelaws, 1932, the Wheat Commission have decided to make an advance payment to registered growers who make proper applications on valid wheat certificates delivered to the Commission after the 28th February, 1939, and on or before Saturday, the 29th April, 1939. This advance payment is on account of the deficiency payments that will become due under the Wheat Act for the cereal year ending 31st July, 1939. It will be made on or about Monday, the 22nd May, 1939, and will be at the rate of 4s. 0d. per cwt., equal to 18s. 0d. per quarter of 504 lbs. This payment will place growers who have delivered wheat certificates since the 28th February, 1939, in the same position as those who have already received an advance payment during the current cereal year.

The Commission hope to make an advance payment later in the cereal year to growers who deliver wheat certificates after the 29th April.

SCHEME FOR PLOUGHING UP OF GRASS LAND.

The Minister of Agriculture and Fisheries announced in the House of Commons on May 3rd, that the Government propose to invite Parliament to authorise the payment of grants of £2 per acre in respect of permanent grass land ploughed up after that date and before the 31st October. Pending the necessary legislation, the Departments of Agriculture in the United Kingdom are prepared to receive from farmers notices of intention to plough, and applications for the Government contribution.

In order to qualify for grant, farmers will be required to satisfy Departments that the land ploughed up—

(1) has been under grass for at least seven years;

(2) has been or is being brought into a state of cleanliness and fertility by approved methods such as by fallowing, by direct re-seeding, or subject to the approval of the Agricultural Departments concerned, by taking a suitable catch crop during the present year, for example, mustard, vetches, rape, kale, flax, turnips, buckwheat, and mixtures of rye-grasses and clovers.

It should be understood that such ploughing is intended to be over and above the normal rotation ploughing on the farm.

It is not proposed to pay grants on areas less than two acres, and odd fractions of less than half an acre will be disregarded. Thus the lowest payment

to be made will be £4, and all payments will be multiples of £1. The Agricultural Departments are making immediate arrangements for ensuring by inspection of farms or otherwise that contributions shall not be paid on acreages in excess of those actually broken up after the 3rd May, that cultivations are properly carried out, and that the conditions mentioned above are being duly observed.

Farmers in Northern Ireland who propose to break up permanent grass land under this scheme should write to the Ministry of Agriculture, Stormont, Belfast, in the form indicated below, giving their name and postal address and the area it is intended to plough. In due course an official form of declaration and application for the grant will be sent to each farmer for completion, but there is no need for any delay in proceeding with the proposed work. Every notice of intention to plough received will be acknowledged, and upon receipt of this acknowledgment there is no reason why the farmer, if he is satisfied that he will be able when required to show that the necessary conditions have been fulfilled, should not put the work in hand forthwith.

Farmers who intend to take advantage of this scheme are reminded of the desirability of applying suitable fertilisers and lime, and of the facilities under the Land Fertility Scheme for assistance in the provision of lime and basic slag.

Farmers are strongly advised to consult their County Agricultural Instructor as to the suitability of their land for ploughing up and re-seeding, and as to appropriate seeds mixtures.

Farmers who intend to plough grass land should write to the Ministry in the following terms—

"To the Ministry of Agriculture, Stormont, Belfast.

(date).....1939.

Please write distinctly

I propose to plough up permanent grass land now in my occupation, and require an application form for the Government contribution of £2 per acre, announced on the 3rd May."

Name .....

Postal Address.....

.....

Name of Farm
(if different from
postal address).....

Total acreage of
permanent grass
on farm.....acres.

Acreage proposed to
be ploughed up.....acres.

Approximate date
of ploughing.....1939.

Catch crop, if
any, to be sown.....

(This Form may be used.)

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

CABBAGE AND KALE.—It is not yet too late to plant a small area with cabbage and kale plants where this has not already been done. The manurial mixture recommended for these crops was given in last month's Report. Farmers are reminded of the value of green food for all classes of stock during the winter months, and are urged to plant at least a small area of these crops. If this is done now the crop will be ready for use next autumn, and will be very useful for stock which are being housed for the winter.

MANGELS.—The mangel seed should, if possible, be sown before the end of May. Attention is drawn to the value of mangels as a supplement to turnips for spring use, or where satisfactory crops of turnips cannot easily be grown. Mangels respond well to heavy manurial treatment. See last month's Report for the manurial dressing recommended.

TURNIPS.—Where large areas of turnips are grown, it is a good plan to prepare and sow only a portion of the area at a time, especially if the weather is dry. A good practice is to drill only as much ground as can be manured and sown in the one day, as by so doing the moisture in the ground and in the manure is conserved and a good braird is likely to be obtained. Further, the sowing of turnips over an extended period will ensure that the crop will not all be ready for singling at the same time, and this will avoid the possibility of growth getting ahead of the workers.

Where " finger-and-toe " disease is prevalent it would be advisable to apply a dressing of burnt lime at the rate of from 25 to 30 cwt. per statute acre before the drills are opened, or, if this is not practicable, basic slag should be used as a source of phosphatic manure, and from 4 to 6 cwt. per statute acre applied to the drills. Brown Heart disease of turnips, which is characterised by a browning of the heart of the roots with subsequent rotting, can be prevented by applying Borax to the ground intended for turnips at the rate of 20 lb. per statute acre. In order to ensure even distribution, the borax should be mixed with a convenient quantity of sand. It is important that the borax be distributed evenly, and that not more than 20 lb. per statute acre be used, as excess would have a very detrimental effect on the young turnip seedlings. The best time to apply borax is before the drills are opened.

LEATHER JACKET GRUBS IN OATS.—This pest can be destroyed by applying a mixture of 1 lb. Paris Green and 28 lb. bran per statute acre to the crop, late in the evening.

Paris green can be obtained through a chemist, and as it is extremely poisonous it should be handled with due care. For further particulars see Leaflet No. 22.

Destruction of Charlock.—It is important to attack charlock or "preshaugh" early; if possible, before the formation of the familiar yellow flowers. The most convenient method of attack is to spray with a copper-sulphate solution, and the following strengths are advised for charlock in oats and flax, respectively—

(1) For oats—a 3% solution (12 lb. bluestone in 40 gallons water).

(2) For flax—a 2½% solution (10 lb. bluestone in 40 gallons water).

For further details see Leaflet No. 38.

Care must be exercised when spraying the flax crop with bluestone, as there is considerable risk of injury to the crop. An alternative spray for flax can be prepared from a material known as Raphanit, which has been used in small scale tests with satisfactory results. The best results were obtained in these tests when a 4 per cent. solution was applied at the rate of 60 gallons per statute acre. The best time to spray is when the flax is from 3 to 4 inches high.

Pastures.—Mixed grazing with different classes of farm stock will result in better value being obtained from the pastures, as this type of grazing will generally mean a more thorough cleaning up of all grasses and clovers, and prevents the tuftiness which arises where only one type of stock is grazed. Where excessive growth of clover is feared the pasture should not be grazed heavily in spring, as this encourages clovers and discourages the growth of the grasses. Where the stock available is not sufficient to keep the grasses eaten down the fields should be top-mown with the mower in June. This will encourage the growth of fresh bottom grass and keep the pasture in good condition.

SEASONAL LIVESTOCK NOTES.

Ox Warble Fly.—The final dressing of infested cattle must be carried out between the 7th and 14th June. If this pest is to be stamped out it is essential that all warbles are killed, and attention should therefore be paid to the final dressing so that no flies will appear during the summer. The cattle, which have been turned out on grass, should not be overlooked, but brought in, examined and dressed, if warbles are present.

Feeding Cattle on Grass.—As young grass is rich in protein matter, the feeding of a large proportion of cake to cattle which are being fattened on grass is unnecessary and wasteful. The following ration has been found to give satisfactory results:—

2 parts by weight Crushed Oats.
2 „ „ Maize Meal.
1 part „ Bran.
1 „ „ Decorticated Earthnut Cake.

The quantity of this mixture to be fed will depend on the quantity and quality of grass available, but usually from 2 lb. per head daily at the beginning of the fattening period, increased to 5 or 6 lb. towards the finishing period, will be sufficient.

Dairy Cows.—Where ample supplies of good quality grass are available for dairy cows it will be necessary to feed concentrates only to the heavy milkers, as the grass will provide sufficient food for the others.

Calf-rearing.—Purchasers of newly-dropped calves should exercise particular care in the feeding of these animals during the first few weeks, as the calves are often subject to digestive troubles at this stage. It is better to under-feed than to over-feed, and a dose of from $\frac{1}{2}$ to $\frac{3}{4}$ ounce of castor oil may, with advantage, be given to the calf with the first feed.

Useful hints on calf-rearing are given in Leaflet No. 54.

Sheep.—The clipping season is now here, and it should be borne in mind that the value of the wool will depend on the way in which it is handled and marketed. Care should be taken to prevent the sheep coming in contact with newly-tarred posts, as the presence of tar in the wool greatly reduces its market value. The sheep should be handled carefully at clipping time, and clipped when the fleece is dry. A sheet should be spread on the ground on which to turn the sheep to prevent foreign materials from getting into the wool.

When shearing has been completed, the fleece should be spread out and all dirty locks removed. The edges should then be folded over lengthwise and the fleece carefully rolled from the tail towards the head, using the neck end as a band to tie up the rolled fleece. On no account should the fleece be tied with binder twine or string.

Further information on this subject is given in Leaflet No. 23.

SEASONAL GARDEN AND ORCHARD NOTES.

The Spraying of Apple Trees.—Spraying with Bordeaux mixture for the prevention of Apple Scab disease should be carried out at intervals of from 14 to 21 days until the middle of July on trees of such varieties as Bramley's Seedling, Newton Wonder and Lane's Prince Albert. It has been shown that if the trees are kept free from infection during the late summer and autumn the disease will not develop nearly to the same extent the following season as it will if sprayings during May, June and July of the previous year are not carried out. Such varieties as Grenadier, Royal Codlin and Royal Jubilee, which are not subject to severe attack by apple scab disease, need not be sprayed after petal fall.

The Grafting of Apple Trees.—Scions which were put on during recent weeks should be examined and any cracks which may have appeared in the material covering the grafts should be closed. Any adventitious shoots that may have developed on the stock should be removed by pulling them off in a downward direction.

Strawberries.—The strawing of the beds should now be done. This practice usually pays well for the material and the labour involved. In seasons when unsuitable weather conditions prevail during the period the fruit is ripening, the loss of berries will be heavy if they are lying on the surface of the soil. The object of strawing the beds is to provide a suitable carpet for the developing berries, and thus to keep them clean and sound. The straw should be placed around the plants before the berries form; if the operation is delayed until after the fruit has set each truss of fruit will have to be lifted and the straw placed underneath. If the straw is chopped into short lengths, the spreading of it around the plants can be done thoroughly with great speed and ease. The plantation should be given the final hoeing just before the straw is laid, and if the straw is laid at the rate of about 30 cwt. per acre, it will also keep weeds in check until after the fruit has been gathered.

Raspberries, Currants and Gooseberries.—These will benefit considerably if the soil in which they are growing is mulched during the summer with straw, lawn grass cuttings or other decaying vegetable matter. This mulching helps to conserve the moisture in the region of the roots of the plants and also keeps weeds in check.

Vegetables.—To keep up a supply of lettuce, peas and dwarf beans, successional sowings should be made at intervals. The last sowing of peas and beans should be made during the last week of May and an early variety of pea should be chosen for this sowing.

Celery raised on a hot-bed in March should soon be ready for planting out in trenches. This crop requires generous feeding and ample moisture. The trenches should be about 12 inches wide, from 9 to 12 inches deep and from 4 to 5 feet apart. A liberal quantity of well-rotted farmyard manure should be placed in the trenches, lightly dug in, and covered with a couple of inches of good soil. The plants may be set out in one or two lines, allowing about 9 inches between the plants. If set in two lines, the plants in one line should be opposite the spaces in the other line.

Preparations should now be made for planting out Brussels sprouts, broccoli, autumn cauliflower, cabbage, savoys and borecole. The ground for Brussels sprouts and broccoli should be made firm.

"Finger-and-Toe" or "Club Root" Disease.—All plants of the cabbage family are subject to attack by "club root" disease which may cause serious

losses. If the disease has appeared on plants grown in the same soil in previous years, steps should be taken to safeguard this year's crop. Treating the ground around the plants with a solution of mercuric chloride enables a crop to be grown on infected land, but the treatment does not eradicate the disease from the land. The solution is made by dissolving one ounce of mercuric chloride (corrosive sublimate) in a little hot water and then adding water to make up to 8 gallons. About half a pint of the solution should be poured into the hole made to receive each plant, at the time of planting out.

Land which is known to be infected with the disease should be dressed with freshly-burnt lime at the rate of 2 tons per acre. For two or three years afterwards it should be limed at half that rate per acre. It is an advantage not to grow cabbage and related crops on the same piece of ground in successive years. Care should be taken to guard against introducing the disease to clean ground by manure from stock fed on diseased turnips (which are also subject to the disease).

Carrot Fly.—This pest is becoming prevalent in gardens where carrots are grown regularly. The best method of preventing loss is to scatter crude naphthalene along the rows at the rate of 1 cwt. per acre (1 lb. to 60 yards of drill) as soon as the plants are well brairded. This should be followed by further dressings at weekly intervals until mid-August. The pest also attacks parsley, parsnips and celery.

Further particulars regarding this pest, and also of "finger-and-toe" disease are given in a new leaflet No. 89—"Some Pests and Diseases of Vegetable Crops", copies of which will be available soon.

Flowers.—Half hardy flowering plants such as Asters, Dahlias, African and French Marigolds, Nemesia, etc., should be gradually hardened off prior to planting out towards the end of May or early in June. If the weather is dry it will be necessary to water the plants carefully until they are properly established.

SEASONAL POULTRY-KEEPING NOTES.

Care of Eggs.—Special attention is necessary during the summer months if first quality eggs are to be produced, and attention should be paid to the following points:—

(1) Pen off all male birds separately from laying hens.

(2) Remove broody hens immediately from the laying flock to a slatted floor coop and provide liberal supplies of food and water.

(3) Collect the eggs from the nests at least three times each day.

(4) Store the eggs in a cool, well-ventilated room and do not permit them to be exposed to sunlight.

(5) Never steep or wash eggs.

(6) Market eggs as soon as possible.

(7) Read Leaflet No. 57 and "Talks to Producers" No. 39.

Management of Pullets.—The pullets of to-day are the egg producers of next autumn and should be treated as such. Pay special attention to the following points:—

(1) Provide regular and adequate supplies of food and water, but do not use any forcing foods.

(2) Keep the pullets in movable houses (see Leaflet No. 21) and move the houses to fresh ground regularly, at least once each week.

(3) Never allow the pullets on stale, parasite-infested ground.

(4) Cull the pullet flock regularly and cash all weakly, unthrifty birds at once.

(5) See the list of leaflets dealing with Poultry and Eggs on the last page of this Report.

Rearing of Turkeys.—Young turkeys require special attention if successful results are to be obtained. It is essential that they should not be exposed to parasites such as gapes and that clean, fresh ground should be provided. While the birds usually do best on free range they should, if possible, be kept indoors during showery weather, or when the grass is wet. Full particulars with regard to the breeding and rearing of turkeys are detailed in Leaflet No. 37.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Educational Exhibit at Balmoral Show.—The Ministry's Educational Exhibit will be staged in the Central Exhibition Hall, at the show of the Royal Ulster Agricultural Society at Balmoral on the 24th, 25th, 26th and 27th May. This exhibit will demonstrate various aspects of the work of the Ministry and include useful hints and advice on many of the problems with which the farmer, the fruit and vegetable grower and the poultry-keeper are confronted.

A new feature of this Exhibit will be the showing of educational films dealing with various topics of agricultural interest. These films will be shown in the Annex to the Exhibition Hall at intervals during the four days of the Show.

For further details of the Exhibit see article on page 19 of this report.

Ox-Warble Fly.—The fourth dressing of infested cattle must be carried out between the 7th and 14th June.

Leather-Jacket Grubs.—Where attacks are suspected, immediate precautionary measures should be taken by the application of a Paris Green and bran bait. The bait is cheap and easy to apply and will not do the crop any harm. Further particulars are given in Leaflet No. 22.

Destruction of Charlock.—Charlock can be a very troublesome weed if allowed to spread. It can, on the other hand, be controlled easily by spraying with suitable solutions as described in Leaflet No. 38.

Sheep Dipping.—Farmers should note that the summer sheep dipping period extends from 15th June to 15th August. All sheep must be dipped twice within that period, with an interval of not less than seven or more than fourteen days between the two dippings.

Broadcasting.—The Belfast station of the British Broadcasting Corporation has arranged to broadcast the following talks on agricultural topics.

Day and Date	Time	Subject	Speakers
Monday, 22nd May	8-15 to 8-30 p.m.	How I run My Farm.	Mr. S. J. Crowe, Drumwhinney House, Kesh, Co. Fermanagh.
Monday, 5th June	7-30 to 7-45 p.m.	Healthy Seed Potatoes.	Dr. A. E. Muskett, Queen's University Belfast.
Monday, 19th June	—	Summer and Autumn Management of Grassland. (Discussion.)	Senator J. R. Perceval Maxwell, D.L., Finnebrogue, Downpatrick and Prof. S. P. Mercer, Queen's University.

NEW LEAFLETS.

The following new leaflets have been prepared and copies are now available:—

LEAFLET No. 86. Manures and the Manuring of Farm Crops.—This leaflet contains a description of the uses and effects of the various manures, and also particulars of the manurial treatment recommended for the various farm crops. A study of this Leaflet will enable farmers to make the best use of manures purchased.

LEAFLET No. 87. The Production of Potatoes for Seed.—There is considerable scope for the development of a trade in the shipment of seed potatoes from Northern Ireland to Britain and Overseas Countries. This leaflet gives hints to growers as to how best to set about catering for this trade.

LEAFLET No. 88. Tomato Growing.—This leaflet was prepared in response to many requests for advice on this subject. Not only does it contain full information on the raising and management of the plants but also on the prevention and control of the various pests and diseases to which tomatoes are subject.

LEAFLET No. 89. Some Pests and Diseases of Vegetable Crops.—The cultivation of vegetables is dealt with fully in Leaflet No. 67, which has been revised and brought up-to-date. Vegetable crops are often attacked by various pests and diseases, and Leaflet No. 89 deals with the prevention and control of the commoner pests and diseases of these crops.

LEAFLET No. 90. The Improvement of Grassland.—There are large areas of inferior grassland in this country which could be converted into good pastures with very little work or expense by doing "the right thing at the right time". This leaflet is intended as a guide to farmers who wish to improve their pastures.

LEAFLET No. 48. The Fattening of Cattle.—The numbers of cattle fattened in this country have increased during the past few years, and this leaflet has been prepared with a view to providing farmers with a simple account of the rationing of fattening cattle and with a few useful hints on management. The leaflet deals with fattening cattle on grass as well as winter fattening.

REVISED LEAFLETS.

The following Leaflets have been revised and brought up to date:—

LEAFLET No. 2. Improvement of Farm Poultry.—This leaflet contains very useful hints for poultry-keepers and describes clearly how to recognise the profitable and unprofitable hens.

LEAFLET No. 7. Potato Growing Trials.—A description of the various varieties of potatoes and of the characteristics of each is given in this leaflet, along with results of recent trials.

LEAFLET No. 9. The Renovation of Orchards.—Fruit can be produced quite cheaply in this country, but satisfactory crops will not be obtained from fruit trees which are not properly looked after. This leaflet outlines the care and attention which apple trees should receive so as to obtain good crops of clean fruit.

LEAFLET No. 31. Coccidiosis in Poultry.—This disease causes heavy losses amongst poultry flocks, and methods for prevention and control of the disease are given in this leaflet.

LEAFLET No. 38. The Destruction of Charlock.—The most efficient and economical means of destroying Charlock is by applying a suitable spray. The preparation and application of suitable sprays are described in the leaflet.

LEAFLET No. 40. The Laying Down and Management of Temporary Pastures.—The majority of pastures in this country are temporary and, if sufficient numbers of stock are to be kept, it is essential that this type of pasture should produce a maximum amount of food. This leaflet contains useful information on the selection of seeds mixtures and on the manuring and management of pastures.

LEAFLET No. 43. Tuberculosis in Poultry.—Every poultry-keeper should be on the lookout for this disease which causes heavy losses amongst poultry. The symptoms of the disease and the methods of preventing and controlling outbreaks are outlined in the leaflet.

LEAFLET No. 59. Bacillary White Diarrhoea.—This disease may be responsible for the death of up to 80 per cent. of the chickens in a hatch, and it is of the utmost importance that poultry-keepers should understand the nature of this disease and know how to prevent it. A new section which has been added to this leaflet explains what is meant by blood testing and is designed to safeguard farmers against misrepresentation by unscrupulous poultry-keepers.

LEAFLET No. 65. The Packing of Apples in Barrels.—This leaflet has been revised to bring the advice into line with the regulations governing the shipment of apples in barrels and should be read by every fruit grower and shipper who ships apples in barrels.

LEAFLET No. 67. The Cultivation of Vegetables.—There is room to expand vegetable production and consumption, and the value of vegetables as a human food cannot be over stressed. This leaflet gives a full description of the sowing, planting and care of vegetable crops, and includes a calendar describing the work which should be done in the garden each month.

LEAFLET No. 74. New Pure Strains of Flax.—This leaflet has been brought up to date and contains the results of the latest flax trials and a description of the characteristics of the newer varieties of flax.

POTATO MARKETING IN GREAT BRITAIN.

NEW RIDDLE REGULATIONS.

The Potato Marketing Board, on April 19th, decided that the minimum riddle measurement for the varieties King Edward, Red King and Gladstone should be reduced from $1\frac{5}{8}$ inches to $1\frac{1}{2}$ inches. The minimum riddle for Golden Wonder is to remain unchanged at $1\frac{1}{2}$ inches, and that for the varieties Kerr's Pink and Redskin at $1\frac{5}{8}$ inches. The minimum riddle measurement for all other varieties is reduced from $1\frac{7}{8}$ inches to $1\frac{3}{4}$ inches. The regulation prohibiting the sale for human consumption of potatoes over $1\frac{1}{4}$ lb. in weight has been cancelled.

BRITISH ISLES
CONFERENCE ON AGRICULTURAL CO-OPERATION.

Following the success of the Imperial Conference on Agricultural Co-operation held at the Empire Exhibition, Glasgow, in July, 1938, and in accordance with a resolution then taken, the Standing Committee of the Round Table Conference, representing the agricultural co-operative movement in the British Isles, is organising a British Isles Conference on Agricultural Co-operation, to be held at Aberystwyth on June 9th and 10th, 1939.

An attractive programme has been arranged including the following papers: "Agricultural Marketing and the Advance of Agricultural Co-operation", by Professor A. W. Ashby; "Credit for Small Holders and Farmers", by Mr. D. Witney, of the Edinburgh and East of Scotland College of Agriculture; "Crop Drying and its Relation to the Future Supply of Feed for Livestock", by Mr. E. J. Roberts, University College of North Wales; "The Relations between Farmers and their Societies", by Mr. W. H. Jones, of the University College of Wales, Aberystwyth; "What Farmers Require of Agricultural Co-operation", by Alderman T. Thomas, Llanelly and District Farmers, Ltd., and "Wool Marketing", by Mr. W. Fergusson, Scottish Wool Growers, Ltd.

Excursions to places of agricultural interest will be arranged.

Full particulars may be obtained from the Organising Secretary, Round Table Conference on Agricultural Co-operation, 10 Doughty Street, London, W.C.1.

SCHOOLS NEWS.

ULSTER DAIRY SCHOOL, COOKSTOWN.

The first term of the year 1939 terminated on the 21st April last, and the results of the examinations held at the end of the term are announced.

The three sixth term pupils, Miss M. Caskey, Edenmore House, Limavady, County Londonderry, Miss J. Fulton, Thornhill, Ballykelly, County Londonderry, and Miss L. G. Irvine, Ballyvallough, Raloo, Larne, County Antrim, who are pursuing the Senior Course for teachers-in-training, passed the examinations, and are continuing their training.

Miss M. Duncan, Drumakeel, Ballycastle, County Antrim, who specialised in Dairying, qualified for the award of a Creamery Scholarship, which entitles her to a period of twenty-four weeks' training at a Creamery approved by the Ministry with a view to qualifying for the Ministry's Certificate of Competency in Creamery butter-making.

Miss E. Ramsey, Knockcairn, Dundrod, County Antrim, and Miss M. Scott, Mill Farm, Ballyrobin, Muckamore, County Antrim, who obtained first and second place at the examination for third term pupils, gained certificates in all subjects, and have been awarded free scholarships to specialise in Poultry-keeping and Domestic Science respectively for a further term at the School.

The following additional third term pupils were successful in qualifying for certificates in Poultry-keeping, Dairying and Domestic Science :—

Miss E. Croskery, Ballystokes, Downpatrick, County Down.
Miss A. McCaul, Killyclogher, Omagh, County Tyrone.
Miss S. P. Kelly, Legavittle, Artigarvan, Strabane, County Tyrone.

Miss B. E. McGinley, Ardgart, Roscar P.O., Belleek, County Fermanagh, was awarded a Certificate in Domestic Science.

The next term at the School will commence on the 12th September and terminate on the 22nd December, 1939. Applications for admission to this term are now being received by the Ministry, and girls who intend to take out a course of training should submit their applications to the Ministry as soon as possible, as equally eligible applicants are admitted to the School in the order in which their applications are received. There is no qualifying examination for admission. Copies of the prospectus, containing application forms, may be obtained free of charge from the Secretary of any County Commtitee of Agriculture, from the local Instructor in Poultry-keeping, from the Lady Superintendent, Ulster Dairy School Cookstown, or from the Secretary, Ministry of Agriculture, Stormont, Belfast.

NORTH WEST SCHOOL, STRABANE.

The County Committees of Agriculture are offering a limited number of Scholarships to cover the cost of tuition, board and residence at this School for the session which will commence on the 18th July next, and girls desirous of being considered for the award of these Scholarships should submit their applications as soon as possible to the Secretary (or Agricultural Organiser) of the County Committee of Agriculture for the County in which they reside. There is no qualifying examination for admission. Copies of the prospectus, containing application forms, may be obtained free of charge from the Secretary (or Agricultural Organiser) of any County Committee of Agriculture, from the local Instructor in Poultry-keeping, from the Lady Superintendent of the North West School, Strabane, or from the Secretary, Ministry of Agriculture, Stormont, Belfast.

EXAMINATIONS IN CREAMERY MANAGEMENT.

The Ministry of Agriculture proposes to hold an examination in July, 1939, in connection with the award of Assistant Creamery Managers' Certificates. Persons desirous of attending the examination should apply as soon as possible to the Ministry of Agriculture, Stormont, Belfast, for the requisite application form and syllabus. Closing date for receipt of applications, 17th June, 1939.

SEVENTEENTH EGG LAYING TEST AT STORMONT.

The seventh period of four weeks ended on the 14th April, 1939. There was a further increase in egg production. The total number of eggs laid by the competing birds was 14,598, which gives an average of 19.30 eggs per bird, as compared with 17.54 for the previous period, and 19.5 for the seventh period of the previous test. Of the 14,598 eggs laid 13,242 (90.71 per cent.) were scoring eggs, i.e., 2 oz. or over in weight.

The highest sectional average egg production during the seventh period is to the credit of the Rhode Island Reds in Section 5, viz.: 20.8 eggs per bird, the Rhode Island Reds in Section 6 being next with an average of 20.6 eggs per bird.

The average production during the 28 weeks the test has been in progress, based on the original flock of 756 birds, was 102.78 eggs per bird, as compared with 101.2 for the corresponding 28 weeks of the previous test. The average production of the 710 birds alive at the end of the seventh period was 107.77 eggs per bird.

Mortality.—Forty-six of the 756 birds accepted for the test have died. This represents a rate of 6.08 per cent. which is 1.22 per cent. lower than the

rate for the corresponding 28 weeks of the previous test. Twenty-six pens have each lost one bird, seven pens have each lost two birds, and two pens have each lost three birds.

The number of deaths and percentage mortality in the different sections are as follows:—

Section.	Breed.	No. of Birds.	No. of Deaths.	Percentage Death Rate
1	White Wyandottes (Open) ...	120	4	3.33
2	,, ,, (Stationholders) ...	60	5	8.33
3	White Leghorns (Open)	60	6	10.00
4	,, ,, (Stationholders) ...	66	9	13.63
5	Rhode Island Reds (Open)	174	5	2.87
6	,, ,, ,, (Stationholders) ...	66	5	7.57
7	Any other breed	150	8	5.33
8	Clubs (Any Breed)	60	4	6.66

The mortality amongst the different breeds is as follows:—

Breed	No. of Birds	No. of Deaths	Percentage death rate
Rhode Island Red	282	13	4.61
White Wyandotte	198	10	5.05
White Leghorn	126	15	11.90
Brown Leghorn	12	1	8.30
Black Leghorn	6	—	—
Light Sussex	66	—	—
Buff Rock	42	5	11.90
Maran	6	2	33.30
Silver Grey Dorking	6	—	—
Welsummer	6	—	—
Ancona	6	—	—

The encouraging features about this analysis are the absence of deaths amongst the Light Sussex, and the comparatively low death rate amongst the White Wyandottes and the Rhode Island Reds. Two and three casualties, respectively, have occurred in two pens of Buff Rocks. The numbers of Brown Leghorns and Marans are too small to justify comment.

The following are particulars of the leading pens in each Section at the close of the seventh period:—

SECTION 1. WHITE WYANDOTTES (Open). 20 Pens.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	1	Mrs. K. Bamforth, Melmount Road, Strabane, Co. Tyrone.	565	181	13	—	746
2	12	Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down.	385	353	22	—	738
3	11	Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down.	422	315	37	—	737
4	8	Mrs. D. C. Gamble, The Retreat, Coalisland, Co. Tyrone.	333	388	63	—	721
5	19	Dr. J. Stuart, Killyflue, Ballymena, Co. Antrim.	185	503	134	1	688

SECTION 2. WHITE WYANDOTTES (Stationholders). 10 Pens.

1	25	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	222	494	49	—	716
2	30	Mrs. M. J. Veitch, Knockninny, Thompson's Bridge, Enniskillen, Co. Fermanagh	444	246	21	—	690
3	23	Mrs. J. Armstrong, Keeranbeg House, Donagh, Lisnaskea, Co. Fermanagh	319	307	39	3	626

SECTION 3. WHITE LEGHORNS (Open). 10 Pens.

1	41	Mr. J. Waugh, Aldfreck, Ballycarry, Belfast	349	372	60	—	721
2	39	Mr. J. Telford, Drumarkin, Rathfriland, Co. Down	430	271	43	1	701
3	34	Mrs. H. M. Fletcher, Ashgrove, Lisadian, Hillsborough, Co. Down	202	331	59	—	533

SECTION 4. WHITE LEGHORNS (Stationholders). 11 Pens.

1	52	Mrs. J. Short, Tullyvalley, Seskinore, Co. Down.	317	321	120	1	638
2	47	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim	149	447	91	1	596
3	50	Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down.	224	360	104	5	584

SECTION 5. RHODE ISLAND REDS (Open). 29 Pens.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	66	The Marquis of Hamilton, Baronscourt, Omagh, Co. Tyrone.	377	436	31	—	813
2	67	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh.	184	551	55	1	735
3	61	Mrs. E. R. Dunwoody, Benmore, Islandmagee, Co. Antrim	146	501	87	2	647
4	74	Mr. R. J. O'Hanlon, Mullahead, Tanderagee, Co. Armagh	342	297	210	1	639
5	73	Mrs. J. M'Neill, Drain's Bay, Larne, Co. Antrim	406	220	13	—	626

SECTION 6. RHODE ISLAND REDS (Stationholders). 11 Pens.

1	83	Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone	302	468	71	—	770
2	89	Miss S. M'Kee, Ardmillan House, Killinchy, Co. Down	285	484	67	—	769
3	86	Miss E. M'Clelland, Ballynashee, Ballyclare, Co. Antrim	208	517	25	—	725

SECTION 7. ANY OTHER PURE BREED. 25 Pens.

1	107	Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Buff Rock)	228	441	168	2	669
2	113	Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry (Black Leghorn)	211	360	115	4	571
3	93	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone (Light Sussex)	368	190	106	—	558
4	106	Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry (Buff Rock)	134	422	217	4	556
5	100	Mrs. J. W. Murland, Ardnabannon, Annsborough, Co. Down (Light Sussex)	214	341	60	1	555

SECTION 8. CLUB ENTRIES. 10 Pens.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	126	Portadown Poultry Club, Co. Armagh (Rhode Island Red)	96	614	116	1	710
2	120	Ballywalter Young Farmers' Club, Co. Down (Rhode Island Red)	251	400	31	—	651
3	124	Dungannon Poultry Club, Co. Tyrone (White Wyandotte)	243	389	96	—	632

"Test Score" means the total of the super-grade and first-grade eggs.

Pen No. 66 of Rhode Island Reds in Section 5 entered by the Marquis of Hamilton retains the leading position in the entire test. Second place has now been taken by Mrs. H. H. Dickson's Pen No. 25 in the Stationholders' Section for Rhode Island Reds, while Miss S. McKee's Pen No. 89 in the same section is third. Fourth place is occupied by Mrs. Bamforth's pen No. 1 of White Wyandottes in Section 1, which has regained the leading position in that Section from Mr. Lenaghan's pen No. 12. Mr. Waugh's pen of White Leghorns in Section 3 holds the leading position for that breed.

AGRICULTURAL INDEX NUMBERS.

Monthly Index Numbers of Prices of Individual Commodities.

(Corrected for Seasonal Variation).

(Base 1927-29 = 100).

Commodity.	1939				1938	1937
	April.	March.	Feb.	Jan.	April.	April.
Cattle : Fat	81†	79	78	76	85	89
Store	88	89	90	91	102	87
Cows : Fat	71	63	60	64	79	66
Sheep : Fat	51	62	59	53	58	71
Bacon Pigs	73†	74†	78r	80r	77	71
Hens and Chickens ...	73	70	71	75	76	67
Ducks	87	95	91	93	92	92
Eggs	105	92	74	103	98	90
Milk : For Manufacture	*	85	86	87	88	82
Whole	118	110	108	107	119	112
All	*	99	100	99	103	97
Farmers' Butter ...	75	76	77	77	81	66
Potatoes	108	95	93	100	78	133
Oats	66	69	74	74	90	94
Hay	79	77	78	79	74	92
Oat Straw	88	84	85	87	86	104
Flax	77	75	79	78	70	76
Grass Seed : Perennial ...	95	93	102	106	49	83
Italian ...	84	82	78	71	54	46
All ...	95	92	104	101	65	64

Revised Index Numbers taking Account of Payments under the Cattle Subsidy, and Government Payments for Milk.

Cattle : Fat	96†	91	90	88	97	100
Milk : For Manufacture	*	109	108	119	105	89
All ...	*	109	108	112	112	101

* Not yet available. † Provisional. r Revised.

Monthly Index Numbers of Prices of Individual Commodities

(Uncorrected for Seasonal Variation).

(Base 1927-29 = 100).

Commodity.	1939				1938	1937
	April.	March.	Feb.	Jan.	April.	April.
Cattle : Fat	85†	80	79	77	90	94
Store	89	89	89	88	102	87
Cows : Fat	74	66	64	66	83	70
Sheep : Fat	61	69	62	51	70	84
Bacon Pigs	81†	81†	81r	81r	87	83
Hens and Chickens ...	78	76	75	79	81	70
Ducks	85	95	91	96	88	87
Eggs	63	57	67	106	58	53
Milk : For Manufacture	*	95	100	100	87	81
Whole	121	121	121	121	121	112
All	*	109	113	112	103	97
Farmers' Butter ...	79	80	81	80	86	70
Potatoes	104	86	90	104	77	134
Oats	68	70	71	69	94	98
Hay	81	77	77	78	76	94
Oat Straw	89	86	88	89	88	108
Flax	76	76	83	83	70	76
Grass Seed : Perennial ...	97	101	114	116	52	86
Italian ...	81	85	87	82	55	43
All ...	101	103	114	107	71	68

Revised Index Numbers taking Account of Payments under the Cattle Subsidy, and Government Payments for Milk.

Cattle : Fat	100†	93	92	90	102	105
Milk : For Manufacture	*	121	126	136	104	88
All	*	121	123	127	112	100

* Not yet available. † Provisional. r Revised.

PRICES USED IN THE CALCULATION OF THE INDEX NUMBERS.

Commodity.	1927-29	1939								1938		1937	
		April.		March.		Feb.		Jan.		April.		April.	
	s. d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Cattle :													
Fat, per live cwt. ...	45 2	38	5†	36	4	35	10	34	11	40	7	42	7
Store, per head	223 7	198	5	198	2	199	4	197	6	229	1	194	5
Cows :													
Fat, per head	336 10	248	8	223	11	214	8	223	7	278	7	234	10
Sheep :													
Fat, per head	53 6	32	8	36	10	33	1	27	5	37	2	44	10
Bacon Pigs :													
per dead cwt.	78 8	63	7†	63	6†	63	11r	63	10r	68	9	65	1
Hens & Chickens, per head ...	3 0½	2	4½	2	3¾	2	3¼	2	4¾	2	5½	2	1½
Ducks, per head	2 6½	2	1¾	2	5	2	3¾	2	5¼	2	3	2	2½
Eggs, per 120 ...	13 6	8	5	7	7	9	1	14	3	7	10	7	2
Milk :													
For Manufacture, per gal.	0 6¼	*		0	6	0	6¼	0	6¼	0	5½	0	5
Whole, per gal.	1 0	1	2½	1	2½	1	2½	1	2½	1	2½	1	1½
Farmer's Butter, per lb. ...	1 5½	1	1¾	1	2	1	2¼	1	2	1	3	1	0½
Potatoes, per cwt.	3 5	3	6	2	11	3	1	3	6	2	7	4	7
Oats, per cwt.	8 1	5	6	5	8	5	9	5	7½	7	7	7	11
Hay, per ton ...	73 8	59	6	56	6	57	1	57	2	56	1	69	6
Oat Straw, per ton ...	47 6	42	5	41	0	41	10	42	1	42	0	51	1
Flax, per stone	12 3	9	3	9	3	10	2	10	2	8	6	9	3
Grass Seed :													
Perennial, per cwt. ...	16 9	16	2	16	10	19	0	19	5	8	9	14	4
Italian, per cwt.	22 7	18	3	19	2	19	7	18	7	12	6	9	8

* Not yet available. † Provisional. r Revised.

MINISTRY OF LABOUR RETAIL PRICES AND INDICES.

The Ministry af Labour general index of retail prices of food in Great Britain and Northern Ireland at April 1st was 35 per cent. above the level of July, 1914, the same as the previous month, but 2 points lower than at April 1st. 1938. The principal changes recorded during the month related to prices of eggs, which showed a reduction, and those of potatoes, which were higher.

The following table shows the average retail prices of certain foods in large towns and villages on April 1st, 1939, March 1st, 1939, and April 1st, 1938, with the corresponding increases over July, 1914.

Article.	Apr. 1st, 1939	Mar. 1st, 1939	Apr. 1st, 1938	Increase over July, 1914.		
				Apr. 1st, 1939	Mar. 1st, 1939	Apr. 1st, 1938
	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per cent.	Per cent.	Per cent.
Beef, British—						
Ribs	1 2¼	1 2¼	1 2½	42	43	46
Thin Flank	0 7½	0 7½	0 7¾	14	14	18
Beef, Chilled or Frozen—						
Ribs	0 9½	0 9½	0 9¾	31	31	33
Thin Flank	0 4¾	0 5	0 5	Nil	2	3
Mutton, British—						
Legs	1 3¼	1 3¼	1 4	48	47	54
Breast	0 7½	0 7½	0 8	15	15	23
Mutton, Frozen—						
Legs	0 10¼	0 10¼	0 10½	50	50	53
Breast	0 4	0 4	0 4¼	—1*	Nil	2
Bacon (Streaky) ...	1 3¼	1 3¼	1 3¼	36	36	36
Butter—Fresh	1 4¾	1 5	1 4¼	15	17	13
Salt	1 3½	1 3¾	1 3	10	11	5
Cheese	0 10½	0 10¾	0 11	22	24	26
	Per qt.	Per qt.	Per qt.			
Milk	0 6¾	0 6¾	0 6¾	94	95	93
	Each	Each	Each			
Eggs (Fresh)	0 1¼	0 1½	0 1¼	6	18	—3*
	Per 4 lb.	Per 4 lb.	Per 4 lb.			
Bread	0 8½	0 8½	0 9½	46	46	62
	Per 7 lb.	Per 7 lb.	Per 7 lb.			
Flour	1 1¾	1 1¾	1 3¾	30	31	49
Potatoes	0 6¼	0 5¾	0 6	28	21	26

*, Decrease.

The cost of maintaining the pre-War standard of living of working-class families at April 1st was approximately 53 per cent. above the level of July, 1914, as against 53 per cent. at March 1st and 54 per cent. a year ago.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st May, 1939, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
Protein Foods :	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed (whole)	—	16 0	16 0	16 0	17 6	18 0	17 6	—	17 0	—
Linseed Cake, home-made ...	—	13 0	11 6	12 0	—	12 6	13 6	—	12 6	—
Linseed Cake, foreign	11 6	12 0	11 0	11 0	11 0	12 0	11 6	11 6	11 0	10 9
Linseed Cake Meal ...	11 6	12 0	11 0	11 0	11 0	11 6	13 6	12 0	11 6	11 0
Cotton Cake, decorticated ...	9 6	—	9 6	10 6	10 0	10 0	10 0	10 3	10 0	10 0
Earthnut Cake, decorticated ...	9 3	—	9 0	9 0	—	9 0	9 6	9 3	9 6	8 6
Soya Bean Meal (extracted) ...	10 1½	10 0	10 3	10 0	—	11 6	10 0	10 9	10 3	11 0
Fish Meal (60% protein) ...	17 6	17 0	16 6	16 6	—	16 6	17 0	16 6	16 9	16 6
Meat Meal (60% protein) ...	16 6	15 0	13 0	13 6	14 0	16 6	15 6	15 6	15 0	16 3
Meat and Bone Meal (40% protein)	—	10 0	8 6	9 6	—	10 6	9 6	10 3	—	10 6
Medium Protein Foods :										
Palm Kernel Cake	9 0	—	8 6	7 6	—	8 6	—	—	9 0	—
Palm Kernel Meal	9 0	9 6	8 6	7 6	—	8 6	—	—	9 0	—
Starchy Foods :										
Maize (whole)	7 0	—	7 0	6 6	—	7 3	7 3	7 0	—	—
Maize Meal	7 6	7 3	7 0	7 0	7 6	7 3	7 6	7 5	7 3	7 6
Maize Flaked	8 0	7 9	7 6	7 6	7 9	7 9	8 0	7 9	8 0	8 6
Wheat (whole)	6 6	6 0	6 0	6 0	6 0	6 3	6 6	6 9	7 0	6 6
Bran, Red	7 9	8 0	7 6	7 6	—	8 0	7 9	8 6	8 0	7 6
Bran, White	9 0	9 0	8 3	9 0	8 9	9 0	8 6	9 6	9 9	9 6
Pollard, Brown	7 9	7 0	7 0	7 6	—	7 3	7 6	8 0	8 0	7 6
Pollard, White	—	8 6	7 10½	8 6	7 9	7 9	8 9	8 6	9 0	8 9
Barley Meal	7 9	7 6	7 6	7 6	7 3	7 6	7 9	8 0	7 6	8 0
Tapioca Root Flour	—	—	6 6	6 9	—	—	8 0	—	—	7 0
Oats (whole)	7 6	6 6	6 6	7 3	5 6	6 3	7 6	7 4	5 3	5 6
Crushed Oats	8 0	7 6	7 0	8 0	5 9	6 9	8 0	8 0	7 3	6 6

Non-Concentrates—The average prices at representative markets at the beginning of May, 1939, were as follows :—Potatoes (Main Crop), 3/5 per cwt; Upland Hay, 61/10 per ton; Meadow Hay, 49/10 per ton; Oat Straw, 38/10 per ton; Turnips (Swede), 15/- per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st May, 1939, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equivalent	Starch Equivalent	Average price per cwt. at 1st May, 1939	Average price per cwt. at 1st April, 1939	Cost per unit of protein equivalent May	Cost per unit of protein equivalent April	Cost per unit of starch equivalent May	Cost per unit of starch equivalent April
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	18.75	119.2	16 11	16 5	18 1	17 6	2 10	2 9
Crushed linseed	18.75	119.2	18 0	17 7	19 2	18 9	3 0	2 11
Linseed cake (home made)	24.6	74.0	12 6	12 4	10 2	10 0	3 4	3 4
Linseed cake (foreign)	27.05	74.5	11 4	11 3	8 4	8 4	3 1	3 0
Linseed cake meal	24.6	74.0	11 7	11 10	9 5	9 7	3 2	3 2
Decorticated Cotton cake	34.65	68.4	10 0	10 0	5 9	5 9	2 11	2 11
Decorticated Earthnut cake	41.3	73.0	9 2	9 1	4 5	4 5	2 6	2 6
Extracted Soya Bean meal	38.3	64.0	10 5	10 5	5 5	5 5	3 3	3 3
Fish meal (60% protein)	53.0	58.9	16 9	16 10	6 4	6 4	5 8	5 9
Meat meal (60% protein)	55.0	61.0	15 1	15 2	5 6	5 6	4 11	5 0
Meat and bone meal (40% protein)	36.0	44.0	9 10	10 1	5 5	5 7	4 6	4 7
Medium Protein Foods								
Palm kernel cake	16.95	73.2	8 6	8 9	10 0	10 4	2 4	2 5
Palm kernel meal	16.55	71.3	8 8	8 9	10 6	10 7	2 5	2 5
Starchy Foods								
Maize	7.65	77.6	7 0	6 11	18 4	18 1	1 10	1 9
Maize meal	7.65	77.6	7 4	7 3	19 2	18 11	1 11	1 10
Flaked maize	9.2	84.0	7 10	7 10	17 0	17 0	1 10	1 10
Wheat	9.6	71.6	6 4	6 6	13 2	13 7	1 9	1 10
Red Bran	10.0	42.6	7 10	7 11	15 8	15 10	3 8	3 9
White bran	10.0	42.6	9 0	9 2	18 0	18 4	4 3	4 4
Brown pollard	10.85	56.5	7 6	7 7	13 10	14 0	2 8	2 8
White pollard	10.85	56.5	8 5	8 7	15 6	15 10	3 0	3 0
Barley meal	7.3	71.4	7 8	7 7	21 0	20 9	2 2	2 1
Oats	7.6	59.5	6 6	6 7	17 1	17 4	2 2	2 3
Crushed oats	7.6	59.5	7 3	7 4	19 1	19 4	2 5	2 6
Tapioca root flour	1.2	83.5	7 1	7 3	118 1	120 10	1 8	1 9
Non-Concentrates								
Potatoes	0.85	18.5	3 5	3 7	80 4¾	84 4	3 8¼	3 10½
Turnips (Swede)	0.7	7.3	0 9	0 9¾	21 5¼	23 3	2 0¾	2 2¾
Upland hay	4.9	29.0	3 1	3 0¾	12 7	12 6	2 1½	2 1½
Meadow hay	4.7	37.0	2 6	2 3¾	10 7¾	9 10	1 4½	1 3
Oat straw	0.5	21.0	1 11¼	2 2	77 6	86 8	1 10	2 0¾

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ...	88	1	0.2	9
Potatoes	75	2	0.1	21
Cabbage	89	1.5	0.5	8
Oat Straw	14	4	2	37
Meadow hay ...	10	10	3	45
Pasture grass ...	80	3.5	0.8	10
Fattening Foods				
Crushed oats ...	13	9	6	60
Maize meal ...	12	10	4	70
Barley meal ...	13	12	2	66
Pollard ...	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake	9	40	9	26
Decorticated Earthnut cake	10	46	7	23
Meat meal ...	11	60	6	—
Soya bean meal ...	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given in the table on page 58, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 58 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows :—

Decorticated cotton cake	...	...	5/9d.
Decorticated earthnut cake	...	...	4/5d.
Soya bean meal	...	...	5/5d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	5/5d.
Meat meal (60% protein)	...	...	5/6d.
Meat and bone meal (40% protein)	...		5/5d.

This shows that at the respective prices per ton ruling at present, all three supply protein at about the same cost. It should be noted, however, that in the case of meat meal and meat and bone meal, the former should be used in preference to the latter, since 1 cwt. of it in the meal mixture will provide as much protein as 1½ cwt. of the latter. Besides, having usually a lower content of oil than the 40% protein grade, the 60% meat meal is likely to prove more satisfactory than the lower grade, both from the thriving point of view and as regards producing bacon of good quality. The use of the lower grade of meat and bone meal in mixtures for the feeding of pigs is not recommended.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FERTILISERS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per ton of fertilisers at 1st May, 1939, at representative centres in Northern Ireland.

	Belfast	Londonderry	Antrim	Armagh	Ballymena	Banbridge	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Nitrogenous Manures :											
Nitrate of Soda (15.5% N.)	8 0 0	8 0 0	8 10 0	8 10 0	9 0 0	8 5 0	9 0 0	9 0 0	8 10 0	8 10 0	8 10 0
Sulphate of Ammonia ... (20.6% N.)	7 14 0	7 14 0	8 0 0	8 0 0	8 0 0	8 0 0	8 0 0	8 0 0	8 5 0	8 0 0	8 10 0
Nitro Chalk (15.5% N.)	7 10 6	7 10 6	8 5 0	8 0 0	8 10 0	7 17 6	9 0 0	8 10 0	8 10 0	8 10 0	8 12 6
Phosphatic Manures :											
Superphosphate (16% S.P.A.) ...	3 13 9	3 18 9	3 15 0	3 16 3	3 15 0	3 12 6	3 17 6	3 15 0	4 0 0	4 1 3	4 0 0
Semsol (5% S.P.A., 15½% P.A.)	3 0 0	3 5 0	3 10 0	3 7 6	3 5 0	3 5 0	3 15 0	3 5 0	3 15 0	3 10 0	3 10 0
*Basic Slag (16% to 17% P.A.) ...	2 18 0	2 18 0	—	—	—	—	—	—	—	—	—
*Basic Slag (18% to 20% P.A.) ...	3 6 0	3 6 0	—	—	—	—	—	—	—	—	—
Gafsa Rock Phosphate (26% P.A.) ...	2 10 0	2 17 6	3 10 0	3 0 0	3 0 0	2 17 6	—	3 0 0	3 5 0	3 5 0	3 5 0
Potash Manures :											
Kainit (14% P.) ...	3 5 0	3 5 0	—	—	3 10 0	3 10 0	3 15 0	3 10 0	3 12 6	3 12 6	3 10 0
Potash Salts (20% P.) ...	4 5 0	—	4 7 6	4 10 0	4 7 6	4 7 6	4 10 0	4 10 0	—	4 10 0	4 10 0
Potash Salts (30% P.) ...	5 5 0	5 11 3	5 15 0	5 15 0	5 12 6	5 15 0	6 5 0	6 0 0	5 15 0	5 13 9	5 17 6
Muriate of Potash (50% P.)	8 10 0	—	8 17 6	9 0 0	8 17 6	8 15 0	9 0 0	9 0 0	9 0 0	9 0 0	9 0 0
Apricultural Salt ...	3 0 0	—	2 7 6	2 15 0	2 10 0	2 0 0	—	3 0 0	—	—	3 0 0

Abbreviations : N.—Nitrogen. S.P.A.—Soluble Phosphoric Acid. P.A.—Phosphoric Acid. P.—Potash.

*If obtained under the Land Fertility Scheme, the price of British made basic slag will be 25 per cent. less than the figures quoted, since a subsidy equivalent to one-quarter is payable. The prices for British basic slag, c.i.f. Belfast and Londonderry, are fixed by the Land Fertility Committee and are the same at both these ports. The retail prices at Belfast and Londonderry given above are based on these c.i.f. prices plus the charges approved by the Committee for unloading and distribution. The cost at other centres can be ascertained by adding the cost of carriage from the port to the prices at Belfast or Londonderry.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two different manures or two grades of the same manure, supplying the same fertilising ingredient, can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, at the prices ruling at Belfast for the various manures, as shown on the table on page 63, the costs of the units of the fertilising ingredients are as follow :—

Nitrate of Soda (15.5% N.)	10/3¾	(Nitrogen)
Sulphate of Ammonia (20.6% N.) ...	7/6¼	,,
Nitro Chalk (15.5% N.)	9/8¼	,,
Superphosphate (16% S.P.A.)	4/7¼	(Phosphoric Acid)
Semsol (5% S.P.A., 15½% P.A.)	2/11	,,
Basic Slag (16% P.A.)	3/7½	,,
Basic Slag (19% P.A.)	3/5¾	,,
Gafsa Rock Phosphate (26% P.A.) ...	1/11	,,
Kainit (14% P.)	4/7¾	(Potash)
Potash Salts (20% P.)	4/3	,,
Potash Salts (30% P.)	3/6	,,
Muriate of Potash (50% P.)	3/4¾	,,

It is seen that the price of 14% Kainit is £3 5s. 0d. per ton, and of 30% Potash Salts is £5 5s. 0d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which Kainit is offered. The cost of a unit of potash in the 30% Potash Salts is seen to be only 3/6d., whereas the cost of a unit of potash in Kainit is 4/7¾d. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing at Belfast, Gafsa Rock Phosphate is the cheapest source of phosphoric acid and Sulphate of Ammonia is the cheapest source of Nitrogen.

In connection with the costs of the units of phosphoric acid, as shown in the above table, it should be noted that in the case of Superphosphate, the cost is that of a unit of soluble phosphoric acid; whereas in the cases of Basic Slag, Semsol, and Gafsa Rock Phosphate, the figures represent the cost of a unit of insoluble phosphoric acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three. It should also be noted that the costs of the units of phosphoric acid in basic slag will be less than the figures shown above, if that manure is purchased under the terms of the Land Fertility Scheme.

PRICES OF AGRICULTURAL SEEDS.

The following table shows the average retail cash prices of seeds at 1st May, 1939, with comparative figures for the corresponding dates in 1938 and 1937.

		1939	1938	1937
Corn (Seed) :		s. d.	s. d.	s. d.
Oats (Irish grown)	per cwt.	8 4	10 1½	10 5
„ (imported)	„	10 2½	12 9	13 6
Barley (Irish grown)	„	10 10	12 0	13 1
„ (imported)	„	14 6	14 0	14 7
Root and Green Crops (Seed) :				
Turnips (Swede)	per lb.	2 0½	1 10	2 9
„ (Aberdeen)	„	1 5	1 5	1 7
Mangels	„	1 3½	1 3	1 5
Carrots	„	4 6	4 10	3 9
Parsnips	„	3 0	3 0	1 7
Rape	„	0 6¼	0 6½	0 6
Clover Seeds :				
Broad Red	„	0 11¾	1 1	1 0
Late-flowering Red	„	1 9	1 6½	1 7
White	„	2 2	1 7	1 3
Wild White (Kentish)	„	5 8¾	6 0	8 1
Alsike	„	0 11½	1 6½	1 3
Flax Seed :				
Commercial :—				
Dutch ...	per bag of 13 to 14 stone	33 4	50 0	42 6
*Pure Line Blue-flowering Varieties :—				
Stormont Gossamer	per cwt.	40 0 to	57 6 to	75 0
Stormont Cirrus	per cwt.	52 6	60 0	
Liral Crown	per cwt.	50 0	55 0	
Liral Dominion	per cwt.	to	to	75 0
Liral Monarch	per cwt.	60 0	75 0	
White-flowering Concurrent ...	„	36 6	33 0	37 4
Grass Seeds :				
Irish Perennial 28 lb. to bushel ...	per bushel	8 11½	5 0	7 2
26 lb. „ ...	„	8 1	4 3	6 6
Scots Perennial 28 lb „ ...	„	10 1½	6 2	8 5
Irish Italian 22 lb. „ ...	„	7 3	4 6	5 1
French Italian 22 lb. „ ...	„	8 3	5 0	6 1
Cocksfoot	per lb.	1 0	0 9	0 8
Meadow Fescue	„	0 10½	0 8½	0 9
Timothy	„	0 6¼	0 6¾	0 7
Crested Dogstail	„	1 9½	1 3½	1 6
Rough-stalked Meadow Grass ...	„	2 0¾	1 10	2 2

* Canadian Seed.

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

The numbers of fat cattle at the Belfast saleyards during April were on the same scale as in March. In the first week of the month prices recorded a sharp rise, and although they fell slightly from this level during the succeeding weeks, trade remained firmer than a month earlier. The all-over average for the month was 1/5d. per live cwt. higher than in March at 39/7d. per live cwt. The margin of difference between prices this year and last year has narrowed further, the difference at 8th May being only 10d. per live cwt. Price ranges throughout the month were: Top quality 40/6d. to 44/6d., good commercial 39/- to 40/6d., and rougher sorts 37/- to 39/- per live cwt. The following table shows the average prices of fat cattle during the past five weeks compared with the corresponding weeks a year ago:—

Week ended	*per cwt.*	*Week ended*	per cwt.
8th April, 1939	... 40/1	9th April, 1938	... 42/5
15th „ „	... 39/9	16th „ „	... 41/8
22nd „ „	... 39/10	23rd „ „	... 42/3
29th „ „	... 38/8	30th „ „	... 41/10
Average for month	... 39/7	Average for month	... 42/–
7th May, 1939	... 40/3	8th May, 1938	... 41/1

Store cattle supplies at the saleyards were heavier last month, but a general backward condition of many of the animals resulted in a slow trade. Only the best realised late rates, all other sorts being harder to cash and cheaper. Prices were in some cases £1 lower than in March.

Dairy cattle were in smaller numbers, and a slight improvement was noticeable in the demand, and quotations finished on a firmer basis.

Increased supplies of fat sheep and lambs met a good enquiry all month, especially for best lambs of this year's crop. On average prices closed 1/- to 1/6d. per head firmer than in March.

Price ranges during each week of the month for fat cows, store cattle, dairy cattle and sheep and lambs, are shown in the table on the next page.

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description		Week ended 8-4-39	Week ended 15-4-39	Week ended 22-4-39	Week ended 29-4-39
Fat Cows	Range of 1st quality	£13 to £19	£14 to £18	£14 to £19	£13 to £19-5
	,, 2nd ,,	£10 to £15	£10 to £14	£10 to £15	£10 to £15
Store Cattle					
Large Forward Stores	Range of 1st quality	£14-10 to £16-10	£12 to £14	£14-10 to £16-2-6	£14 to £16-5
	,, 2nd ,,	£13 to £14-5	£10-10 to £11-15	£12-5 to £14	£12 to £13-10
Younger Stores	,, 1st ,,	£11-5 to £12-10	£9-10 to £10-5	£10 to £12	£9-5 to £11
	,, 2nd ,,	£8 to £10-10	£7-10 to £9	£6-10 to £9	£6-5 to £8
Dairy Cattle :					
Milch Cows	Range of 1st quality	£20 to £27	£20 to £26	£21 to £26-10	£20 to £24
	,, 2nd ,,	£16 to £19	£16 to £19	£16 to £20	£16 to £19
Springers	,, 1st ,,	£19 to £23	£18 to £20	£19 to £22-10	£20 to £23
	,, 2nd ,,	£15 to £18	£15 to £17	£16 to £18	£16 to £19
Sheep and Lambs :					
Crossbred and White Ewes ...	Range of 1st quality	40/– to 52/6	40/– to 51/–	40/– to 56/–	30/– to 47/6
	,, 2nd ,,	30/– to 44/–	32/– to 42/–	35/– to 49/–	28/– to 39/–
Blackface Ewes	,, 1st ,,	30/– to 40/–	26/– to 47/–	30/– to 44/–	27/– to 37/6
	,, 2nd ,,	24/– to 35/–	20/– to 35/6	24/– to 30/–	20/– to 29/–
Crossbred and White Lambs ...	,, 1st ,,	50/– to 66/6	50/– to 70/–	45/– to 64/–	44/– to 60/–
	,, 2nd ,,	38/– to 49/–	38/– to 49/–	35/– to 54/–	34/– to 48/–
Blackface Lambs	,, 1st ,,	—	20/– to 26/–	—	—
	,, 2nd ,,	14/– to 20/–	14/– to 18/–	—	—
Crossbred and White Hoggets ...	,, 1st ,,	45/– to 66/–	50/– to 60/–	50/– to 65/–	44/– to 63/–
	,, 2nd ,,	35/– to 50/–	42/– to 48/–	34/– to 50/–	34/– to 48/–
Blackface Hoggets	,, 1st ,,	17/– to 39/–	25/– to 40/6	21/– to 35/–	20/– to 27/6
	,, 2nd ,,	14/– to 29/–	18/– to 24/–	16/– to 29/–	16/– to 19/–
Rams	,, 1st ,,	45/– to 55/–	40/– to 64/–	45/– to 54/–	36/– to 51/–
	,, 2nd ,,	35/– to 49/–	34/– to 48/–	37/– to 45/–	30/– to 43/–

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of April, 1939.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months)	Fat Sheep (over 2 years)	Young Pigs
					Cows	Heifers				
		Per head £ s.	Per cwt. Live weight	Per cwt. Live weight	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
4	Omagh	7 10	36/6 to 38/-	39/-	16 10	15 0	15 10	†1 14	†1 12/6	—
5	Londonderry ...	—	33/6 to 40/-	36/6	19 0	16 0	—	—	—	1 6/6
5	Rathfriland ...	7 0	37/- to 40/-	39/-	16 10	15 5	15 0	*1 12	*1 15	1 11/3
									‡1 3/9	
6	Ballymoney ...	7 0/9	35/- to 39/-	—	16 0	15 5	14 10	—	—	1 7/6
7	Moy	—	37/- to 42/-	39/-	14 10	14 10	14 5	—	†1 5	—
8	Irvinestown ...	7 3/3	35/- to 38/-	37/6	14 10	15 0	14 0	—	—	1 7/6
12	Crossgar	—	37/- to 40/-	—	17 0	15 15	—	—	—	1 18
12	Enniskillen ...	6 2/9	31/- to 37/-	38/-	13 0	13 10	12 0	—	—	1 10
12	Kilrea	6 7/6	35/- to 42/-	38/-	17 0	15 0	—	—	—	1 5
14	Ballygawley ...	—	28/- to 39/-	37/6	14 15	—	13 15	—	†1 16	1 15
15	Portadown ...	5 16	35/- to 38/-	39/-	17 0	16 0	17 0	—	—	1 15
17	Camlough ...	6 0	36/6 to 41/-	38/6	17 0	15 10	13 10	—	†1 10	—
19	Lisnaskea ...	5 8	30/6 to 36/-	34/6	15 0	14 0	13 0	—	—	1 13
20	Ballynahinch ...	—	38/- to 40/-	—	17 0	16 0	—	—	—	2 0
21	Moneymore ...	6 7/6	37/- to 41/-	38/-	15 0	14 0	—	†1 15	†1 15	—
22	Fintona	7 2	38/- to 40/-	37/-	15 10	15 0	14 0	*2 0	†1 15	1 8
								†1 12/6		
27	Antrim	—	39/- to 44/-	38/6	21 10	19 0	—	—	—	1 12
28	Castlederg ...	5 10	35/- to 37/-	37/-	12 5	12 0	—	†1 15	†1 12	1 10
28	Killylea	—	30/6 to 39/6	38/6	17 0	—	14 15	—	†1 15	—
29	Ballymena ...	7 0/6	33/- to 42/-	—	22 0	19 0	20 10	—	—	1 13

* Long Wool. † Downs and Crossbred. ‡ Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland Ports during the following periods:—Months of April, 1939, March, 1939, April, 1938; Four months ended 30th April, 1939, and 30th April, 1938.

PORTS OF :—	CATTLE.						SHEEP.				PIGS.			Horses
	Fat	Stores	Milch Cows	Springers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	
Belfast	4,313	7,727	1,105	76	—	13,221	219	—	211	430	2,494	—	2,494	266
Larne	10	1,696	—	—	—	1,706	—	—	—	—	916	—	916	19
Londonderry ...	413	5,883	17	33	578	6,924	73	—	85	158	299	—	299	7
Newry	26	303	—	—	—	329	31	—	99	130	—	—	—	1
Total, April, 1939 ...	4,762	15,609	1,122	109	578	22,180	323	—	395	718	3,709	—	3,709	293
Total, March, 1939 ...	6,210	19,545	914	74	515	27,258	815	—	3	818	4,380	162	4,542	257
Total, April, 1938 ...	4,740	14,152	817	124	651	20,484	1,233	—	215	1,448	6,533	191	6,724	339
Total, Four months ended 30th April, 1939	25,786	60,749	4,278	300	1,638	92,751	7,932	—	398	8,330	16,853	166	17,019	823
Total, Four months ended 30th April, 1938	21,298	59,788	3,811	299	1,508	86,704	13,712	—	227	13,939	33,681	728	34,409	939

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month of March, 1939, and the three months ended 31st March, 1939, with comparative figures for the corresponding periods in 1938. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS				EXPORTS.			
	Month ended 31st March.		Three months ended 31st March.		Month ended 31st March.		Three months ended 31st March.	
	‡1939	1938	‡1939	1938	‡1939	1938	‡1939	1938
Bacon ... ... cwt.	1,156	3,014	7,789	9,159	36,905	26,745	111,330	84,413
Hams ... ... ,,	434	1,344	2,337	3,881	8,478	11,981	30,209	32,638
Pork ... ... ,,	—	172	355	644	3,795	2,304	10,382	7,001
Butter ... ... ,,	11,400	20,522	38,909	48,405	109	325	427	739
Eggs ... gt. hds.	5,910	154,996	103,951	252,215	299,840	316,643	658,335	593,521
Oat Products (inc. Oatmeal) cwt.	1,433	1,305	7,166	5,783	5,837	5,396	16,627	18,081
Potatoes ... ... tons	988	289	1,773	756	*17,381	*26,639	*36,025	*74,569
Poultry ... ... cwt.	12	273	614	818	8,399	9,916	67,748	71,970
Grass Seeds ... ... ,,	819	2,570	3,412	6,306	33,110	59,140	100,222	134,013
Cream ... ... gals.	—	—	—	—	†23,218	†21,222	†72,197	†58,565

* These figures represent quantities of potatoes inspected by the Ministry for shipment.
† These figures are compiled from the Monthly Trading Returns supplied by Creameries in Northern Ireland.
‡ These figures do not include direct trade with places abroad.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 19 fairs in Northern Ireland during the months of April and March, 1939, and April, 1938.

Description of Live Stock.	April, 1939.		March, 1939.		April, 1938.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ...	7,480	4,919	7,184	4,845	7,498	5,648
Fat Cattle	1,023	964	1,298	1,214	1,241	1,151
Dairy Cattle ...	1,141	836	1,107	792	1,206	971
Sheep	430	307	240	174	419	331
Lambs	64	62	181	101	98	78
Young Pigs ...	2,907	2,105	2,656	2,057	3,282	2,687

ACCOUNT OF TRADE AT FAIRS.

The most noticeable feature of last month's offerings at fairs was the generally inferior condition of store cattle. Most of the animals were thin, and reflected the backward condition of pastures in the country. Supplies were well up to average, but sales were difficult to effect and many animals were unsold. Good forward stock were very scarce and in brisk request, and prices were frequently higher. Good polly bullocks were especially in demand, whilst shippers were fairly active in the purchase of good heifers. On the whole, however, there was a tendency for business to be slow and prices to cheapen slightly. Smaller supplies of beef cattle were usually of good quality and well finished, and the demand in this section ruled steady all month. Prices had a tendency to weaken during the month, but the slight downward trend was checked towards the close, and values finished rather higher than in March. Well-finished medium weight stock of from 8 to 10 cwts. in weight were best sellers and commanded highest prices. Dairy cattle continued to be offered in small to medium supply. Quality was very mixed, but most of the stock was inferior. Best sorts were a good trade, and a few of these fetched higher rates, but poor quality stock was neglected. Good young cows for the English trade were in best demand. Only small supplies of sheep and lambs were forward at the April fairs. Trade for fat animals was good, and prices remained at recent levels, especially for good lambs of this year's crop and fat yearling sheep showing quality. Breeding ewes were, however, a slow trade, and cheaper. There was a good demand for young pigs at most centres during the month. An easier tendency in prices, however, was noticeable at some centres. Store pigs, where offered, were a good trade at firm rates. A fairly good inquiry was passing for brood sows and prices remained at recent levels. The general range of prices was from £6 to £10 10s. per head, according to quality. Good Yorks and York crosses were in best demand at around £8 per head.

11th May, 1939.

ULSTER DAIRY SCHOOL, COOKSTOWN.

U. D. S.

USEFUL and practical courses of instruction in poultry-keeping, dairying and domestic science are provided for girls at this School.

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List of Leaflets and other Publications

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Leaflet
No. 60 Advantages of Winter Agricultural Classes.
Prospectus of Ulster Dairy School.
Prospectus of North West School.
Prospectus of Greenmount Agricultural and Horticultural College.
Scholarships in Agricultural Science.
Scholarships in Creamery Management.
Scholarships in Horticulture.

CATTLE.

Leaflet
No. 54 The Breeding and Rearing of Calves.
,, 5 The Dishorning of Calves.
Circular
No. 5 Why Pay a Tax on the Horns of Cattle?
Leaflet
No. 19 How to Feed Linseed.
,, 48 The Fattening of Cattle.
,, 61 The Care and Management of Bulls.
,, 82 White Scour in Calves.
,, 70 Ringworm.
,, 80 Hoose or Husk in Farm Stock.
,, 13 Contagious Abortion in Cattle.
,, 41 Blackleg, Blackquarter or Quarterill.
,, 64 The Destruction of Warble Fly Maggots in Cattle.
Circular
No. 13 The Ox-Warble Fly.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.

DAIRYING.

Leaflet
No. 16 The Feeding of Dairy Cows.
,, 42 The Purchase of Balanced Rations for Dairy Cows.
,, 36 Advantages of Milk Recording.
,, 39 The Production of Clean Milk.
,, 81 The Construction of Cow Houses.
,, 78 Graded Milk.
,, 77 Licensing of Milk Producers and Distributors.
,, 51 Butter-making on the Farm.
,, 14 Cheese-making on the Farm.

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,, 2 Improvement of Farm Poultry.
,, 3 Feeding for Egg Production.
,, 21 The Uses and Advantages of Portable Poultry Houses.
,, 28 The Construction of a Laying House for Poultry.
,, 29 The Selection and Breeding of Laying Hens.
,, 83 The Care, Management and Feeding of Poultry Breeding Stock.
,, 46 Hints for Winter Egg Production.
,, 57 How to have Eggs of First Quality.
,, 56 Identification of Egg Supplies.
,, 27 How to Keep Eggs Clean.
Talk to Producers
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Leaflet
No. 59 Bacillary White Diarrhoea. (Pullorum Disease.)
,, 52 Gapes in Chickens.
,, 31 Coccidiosis in Poultry.
,, 43 Tuberculosis in Poultry.
,, 32 Roup of Poultry (Fowl Pox).
,, 18 Marketing of Dead Poultry.
,, 37 The Raising and Fattening of Turkeys.
Report on Stormont Egg Laying Test.
List of Accredited Poultry Farms in Northern Ireland.

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,, 75 Pig Production and the Pigs Marketing Scheme.
Talk to Producers
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Leaflet
No. 47 The Care and Management of Sheep.
,, 63 Sheep—Castration, Docking, Foot-Rot and Care of Feet.
,, 23 The Handling and Care of Wool.
,, 24 Fluke in Sheep.

HORSES.

Leaflet
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Register of Premium Stallions in Northern Ireland.

FARM CROPS.

Lists of Growers of Certified Crops of Potatoes.
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,, 11 Fruit Tree Pests—Aphides and Apple Sucker.
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,, 76 Acarine (Isle of Wight) Disease of Bees.
Guide to the Marketing of Fruit Act.

FORESTRY.

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,, 85 The Growing of Trees.

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,, 10 Purchase of Fertilisers and Feeding Stuffs.
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,, 26 Ordnance Survey Maps for Farmers.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price, 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price, 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price, 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price, 2/6 net.

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